

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

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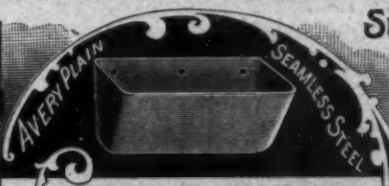
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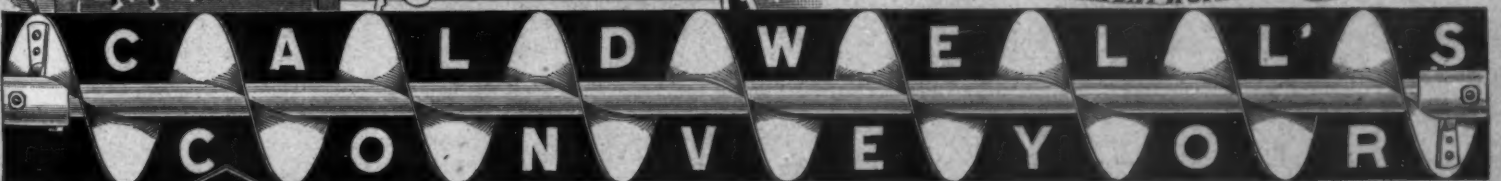
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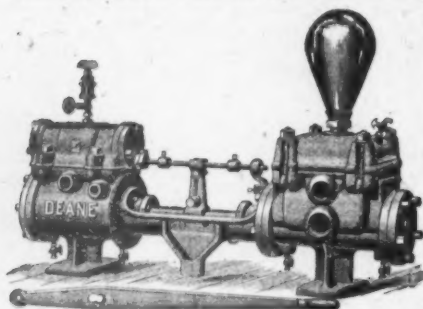
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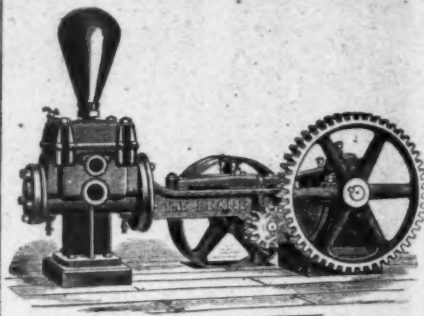
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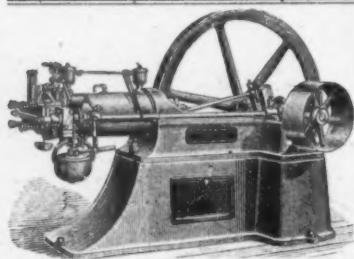
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MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

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WEEKLY.

BALTIMORE, AUGUST 23, 1890.

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BALTIMORE, AUGUST 23, 1890.

Enormous Investments of English Capital to be Made in the South.

The investment of foreign money in the South the coming fall and winter promises to be unprecedentedly heavy. The MANUFACTURERS' RECORD, as the medium of communication between Northern and English investors and the owners of Southern properties, has for years been able to carefully watch all movements looking to the placing of money in this section. It has generally known confidentially of the heaviest investments long before it was permitted by the projectors to make their plans public. Within the last month or so we have learned of upwards of \$60,000,000 of English capital that has been offered for investments in a great many Southern enterprises, including railroads, town schemes, mineral properties, &c. In addition to this enormous amount there are many heavy investments being made which are not included in this summary, as this is only what has been brought directly to our attention, and concerning which nothing has yet been published in Europe or America. For the investment of nearly one-half of this amount, the advice of the MANUFACTURERS' RECORD was sought.

While the MANUFACTURERS' RE-

CORD has for years held a close relationship between the North and the South, it is only within the last twelve or fifteen months that it has pushed its influence to the same extent into nearly all the leading financial houses and iron and steel-making concerns of Great Britain, though, of course, it has had many readers there for years. In that country it has become as invaluable to investors as in the North, and we are daily hearing of the great power that it is exerting in turning English capital to the South.

Within the next six months the aggregate investments of English money in Southern enterprises will astonish the whole country. We are at the beginning of a period of activity which will bring greater prosperity to the South than has been even dreamed of.

MR. JAY GOULD takes a very roseate view of the business outlook and thinks that the higher prices prevailing for farm products will more than counterbalance the decrease in yield in the cereals. Speaking of this subject a few days ago he said:

The difference in money that will go to the growers of wheat, corn, rye, barley and small grain generally will be between \$400,000,000 and \$500,000,000 more this year than last. On corn alone, taking the present market quotation as compared with 1889, and figuring that the crop is, as estimated, but 1,600,000,000, as against 2,000,000,000 last year, there will be in round figures something like \$200,000,000 additional profit to sellers. He laid great stress upon the fact that there will be short crops in many parts of Europe; this will necessitate correspondingly large exports. In a nutshell he said: "The farmers have entered upon an era of prosperity, the like of which has not been seen in more than ten years."

We hope this may prove true of the farmers of the whole country. Certainly the farmers of the South have reason to rejoice over a better financial condition than they have known since the war.

Factories Moving to the Raw Material.

That New England manufacturers realize that they cannot much longer fight against the inevitable is every day becoming more apparent. New England's industrial life is wholly artificial. The materials for its factories and shops must be brought from other sections. Its cotton, its coal, its pig iron, its lumber and its house-building materials, except in rare cases, must all be brought from elsewhere; for its foodstuffs, its wheat, corn, bacon, etc., it is likewise dependent upon other States. The foundation of its whole industrial life is thus unstable, because of this artificiality. The energy of its people, compelled by circumstances to vigorous action, has taken these raw materials and developed great wealth, but with the opening up of the South its days of supremacy in the manufacturing line are numbered.

In the South every condition is favorable for manufacturing. The raw materials are right at hand. The iron ore, the coal, the timber, the cotton, the food products are all here. And nowhere else in the world are they so admirably located in every way for insuring the lowest cost of production, the lowest cost of living, the greatest healthfulness, proximity to the sea for foreign and coastwise shipment on one side, and proximity to the rich and populous West, where the products of the South are needed, on the other side. Here are ideal conditions for permanent prosperity for a dense population and for unequalled manufacturing advancement. These facts are being impressed upon the whole country, and no one sees them more clearly than the long-headed New Englander. Mr. Horace P. Tobey, a manufacturer of that section, in his testimony before the Ways and Means Committee, in speaking of the difficulties with which the manufacturing establishments in that section have had to contend by reason of being so far removed from the raw material, said:

The result has been that New England rolling mills and foundries have been com-

pelled to pay for their raw materials the price ruling at distant furnaces in other States, plus a freight rate of several dollars per ton to their works. As the rolling mills, foundries and machine shops located near such furnaces can transmit their finished goods to the New England consumer nearly as cheaply as the New England mill, foundry or machine shop can bring its pig iron, the tendency has been to throw all the manufacturing, manipulating and finishing of iron and steel, as well as the production of pig iron, into the hands of iron-producing States, and to wipe out the iron and steel industries, large and small, of New England. The surviving mills owe their continued existence, in a small part, to the fact that they have been able to pick up and rework a little old material (scrap iron, castings and turnings) in their own territory, but chiefly to the fact that they have, through the compulsion of circumstances, been systematically engaged in the degradation of American labor in New England.

This is a gloomy view of New England's iron interests, but everybody knows that it is a truthful one. The iron industry was based on artificial conditions, and it passed away when competition came. The cotton industry and many others are built on foundations that will just as certainly give way when the strain comes as that of iron did. The MANUFACTURERS' RECORD has for years proclaimed the "handwriting on the wall," and now New England men like Mr. Tobey see it and admit that they cannot escape the inevitable.

The South's Population.

Notwithstanding the fact that immigration has added over 5,200,000 foreigners to our population during the last ten years, none of whom have settled in the South except in very rare cases, and that the great industrial development of this section, with its attendant Southward trend of men and money, only commenced a few years ago, the South makes a fine showing of population in 1890 as compared with 1880. The preliminary census report gives the population of Southern States as follows:

	1890.	1880.
Alabama.....	1,520,000	1,262,505
Arkansas.....	1,182,000	889,525
Florida.....	395,000	269,493
Georgia.....	1,840,000	1,542,180
Kentucky.....	1,870,000	1,648,696
Louisiana.....	1,115,000	939,946
Maryland.....	1,450,000	934,943
Mississippi.....	1,265,000	1,131,597
North Carolina.....	1,640,000	1,399,750
South Carolina.....	1,187,000	995,577
Virginia.....	1,700,000	1,512,565
West Virginia.....	774,000	618,457
Tennessee.....	1,800,000	1,548,359
Texas.....	2,175,000	1,591,749
	19,864,000	16,192,336

Pennsylvania's Wall of Distress.

It was but a few years ago when the iron makers of Pennsylvania affected to despise the possibility of Southern competition. They lost no opportunity of declaring in public print that the South could never become a serious competitor; that it could only make low grade iron; that it would lose money on every ton that it shipped North, and that Southern furnace building was but a town-booming business. During the last year or two we have heard less of this talk. As one Southern furnace after another went into blast, and all prospered and steadily pushed their product into Northern markets, the iron people of Pennsylvania commenced to realize that they could no longer keep up their courage even by following the example of the little boy who whistled as he went through the graveyard. Instead of ridiculing the possibility of the South becoming a competitor, the Pennsylvania iron makers are now vigorously crying for protection against the South. In the last issue of the Iron Age is a letter from Mr. J. Wesley Pullman urging the railroads of Pennsylvania to come to the relief of the iron men of that State. After referring to the advance in freights on Southern iron lately made by the Pennsylvania Railroad, Mr. Pullman says:

The Eastern Pennsylvania rolling mills must have mill pig metal of quality equal to, or better than, the Southern irons at Southern prices (delivered), working without profit, or they will stop losing money in Pennsylvania and go to Virginia and further South, where manufactured irons can be made at a round profit. The same is true of the heavy iron founders, such as cast iron pipe works and the stove founders, who, together, consume the great bulk of the non-Bessemer furnaces' make of Nos. 1, 2 and 3 iron. We must soon expect to lose the greater part of Southern orders for bars, plates and sheets. We are already beaten in nails. Some of the Albany and Troy stove founders are now building Southern plants, claiming they can no longer take Lehigh foundry pigs to tide, thence up the Hudson, to put into stoves for the general trade. The Hudson river blast furnaces, except those on Bessemer pig, are mostly cold, notwithstanding cheap and good Champlain and Dutchess county ores, and the few stacks still blowing can hardly live at existing prices.

Mr. Pullman is undoubtedly correct. Pennsylvania rolling mills must have cheap iron or they will be compelled to move South, and as Pennsylvania furnaces cannot make cheap iron the movement Southward is inevitable. The South has captured the stove market. It will soon capture many other lines of industry dependent upon iron.

According to Mr. Pullman "the only hope of relief for Eastern blast furnaces is a reduction of the local rates on Pennsylvania iron," and so he hopes that the Iron Age "may convince the Eastern Pennsylvania railroads and the coal companies that prompt relief is needed to avoid the bankruptcy or closing up of many of

the furnaces and mills located on their lines."

Truly this is a wail of distress. The MANUFACTURERS' RECORD can only advise the people who are unfortunate enough to own Eastern Pennsylvania furnaces to sell out and go South, where they can get in on the ground floor if they move quickly enough. There are some rumors that some of them hope to unload on our English friends, and leave them to bear the burden of a declining business while they move Southward with English money as their capital. But whether the English buy Pennsylvania furnaces, and thus enable Pennsylvania iron makers to take the capital and go South, or whether the Englishmen are smart enough to go South themselves and invest where profits are sure, the South is the winner in either case.

Profits in Southern Real Estate.

The following is the advice given by the Railway Age to a railroad man asking guidance in investing his savings:

As a means of investment from which a sure income may be obtained, railway stocks certainly at present, in our judgment, are not to be commended to the man of small means.

If speculation, with the hope of increasing the principal rather than of securing a fixed income, is the purpose in mind, we would still say to the man of small means, don't buy railway stocks. The capitalist and the daring speculator may very likely wisely invest in this security, but for the man with the few hundreds or thousands constituting his all, the future of this and all other stocks is involved in so many contingencies that he would be taking a serious risk in buying it. Money can be safely put at interest so as to earn 6 or 7 per cent annually without any danger of the loss or depreciation of the principal, which can not be said of railway stocks; while if the increase of the principal, while taking only a moderate risk, is the object, we would venture to recommend the judicious purchase of real estate in or near some rapidly growing city. Land values at least can not be knocked up and down by rumors on Wall street, and the owner of land always has something tangible, even if the increase in value is not as large or rapid as he may have hoped.

Coming from a railway paper, and a very conservative one, this advice should carry a great deal of weight. The Railway Age might have gone further and advised investment in sections of the country which had not yet been overdone, and where future development would enhance values enormously. Southern real estate at present prices is the best investment obtainable. It is in the track of coming activity. The advantages of the South, from both agricultural and industrial standpoints, are just beginning to draw the tide of money and men, and real estate values, as a whole, are still remarkably low when all the conditions are considered. Whether the capitalist be a small or a large one, and whether he puts his money in town, city or country, in timber, mineral or agricultural land, with any sort of judgment, he cannot miss it. Southern real estate combines the great possibilities of a speculation with the safety of permanent investment.

A Southern Triumph.

The "turning down" of the Force bill was a signal triumph for the South, not in a political or partisan sense, but better and broader than that—a great and significant victory of business influences and interests. The Force bill has been defeated, for there seems to be no doubt of it, by the policy advocated by the MANUFACTURERS' RECORD from the outset, in which the sensible newspapers and thoughtful people of the South followed. The MANUFACTURERS' RECORD, as the representative of the commercial and industrial South, has immeasurably more pleasure in the settlement of this question, as it has been settled, along business lines, than if the South had been able, as some of its hot-heads were disposed, to accomplish the same end by violent measures like the boycott. So far as the game of partisan politics is concerned, it makes no difference to us which party is knocked down and dragged out. Our interest is in the permanent welfare of the South. We stand for iron, coal, timber and cotton and the multiplicity of interests and industries of which they are the basis. We consider Northern co-operation necessary for the early fulfillment of the South's destiny, and we have devoted our efforts to securing this co-operation.

The MANUFACTURERS' RECORD has all along contended that commercial intercourse must be the basis of the strongest union between the North and South. Mutual interest is the surest and the only sure footing. Orators may soar, poets sing, grand armies fraternize, but all this evaporates, and we find some Northerners ready to pass a Force bill and some Southerners ready to strike back with a boycott all the same.

In the recent change of heart experienced by some United States Senators, the MANUFACTURERS' RECORD finds palpable and unmistakable evidence of a solid and practical and lasting union of the two sections. It is a splendid indorsement of Southern resources. Pennsylvania, with its \$50,000,000 or more invested in the Southern States, and its industrial and money-making eye fixed upon the rich Southern mineral belt, opposes its great influence to disturbing legislation. Other Northern States with smaller but increasing interests tell their Senators to go slow in this business. These powerful influences accomplish what a political minority was powerless to do, especially in the face of an irritating boycott agitation.

Great as is the attained development of the South, and gratifying as is the show of Northern interest in our section, only a beginning has been made. The North and the whole world is watching the South with rapt attention. Comparatively speaking, outside investment as yet represents only some small change the capitalists have put in, and the recent assertion in Congress of the

business interests of the country in the South's favor for the first time, we believe, since the war, shows how satisfactory the experiment has been. To say nothing about foreign capital, which is showing a marked Southward gravitation, the time is close at hand when a large share of our own \$200,000,000 monthly increase in the country's wealth will seek employment in the South. An identity of interest will soon be established that will wipe out entirely the sectional lines across which there has been so much fighting in Congress in the past twenty five years, and we may even hope that the defeat of the Force bill will mark the beginning of the end of that regime, and the substitution of business principles for politics in shaping national legislation.

Reciprocity.

The primary purpose of establishing a tariff upon imports is to provide sufficient funds to defray all expenses of the national government. These funds must be raised annually, and the founders of our government wisely decided that the American people would prefer to raise whatever money might be needed by duties on imports rather than by levies of direct taxes upon themselves. Those wise founders also concluded that the young nation could never wax strong and hold its own against other countries unless it became independent of all others by making within its borders everything necessary for domestic use and consumption, and by carrying on trade with foreign nations in ships built, owned and manned by its own citizens. Among the most important of the earliest acts of Congress were those that placed such duties on imports as would not only provide revenue, but would also encourage Americans to engage in manufacturing, and those other acts that were intended to build up a merchant marine that should extend American commerce and provide a large body of skilled seamen for the national defense in case of war.

No pages of American history are so filled with fluctuations as those which recount the ups and downs of tariff and marine legislation. This is not surprising when all conditions are taken into account. Before 1861 the United States was a nation "one and indivisible" in theory rather than in fact. The increasing agitation growing out of climatic, geographical and other well-known causes prevented unity of feeling and action. Theories antagonized theories, facts were arrayed against facts, and interests against interests, while political parties, striving to keep the lead in the ever varying currents of public opinion, changed the laws with such frequency that the wonder is that during the first eighty years of its national life the country increased at the rate it did in population, wealth and power.

Since 1861 events have crowded upon each other in quick succession, momentous changes were wrought in

the body politic, and the nation is not only "one and indivisible" in fact, but its people as a whole hold firmly the conviction that while the general welfare is paramount to all local interests, yet that these latter also can and must be conserved. No stronger proofs that this is the popular feeling are needed than the discussions in Congress and in the newspapers of the McKinley bill, the two shipping acts and the Blaine reciprocity proposition. These measures are essential parts of a system, upon the adoption, modification or rejection of which will rest the prosperity of the United States for the immediate future. Given the passage of the several bills named, either as they now stand or with such amendments as Congress in its wisdom may make, it is of the highest importance that the reciprocity plan proposed by Secretary Blaine should also be adopted, for it will be a strong and keen-edged wedge for opening many foreign markets to American products, and for increasing with great rapidity the volume of our international commerce.

This reciprocity plan is simple; it can easily be carried into effect; it cannot possibly injure any American industry, but will help all now existing, and it will give life to many new ones as soon as it has gone fully into operation. In this suggestion the country has at last an economic measure upon which men of all shades of political thought may cordially unite, and from which, should it be adopted, a great extension of foreign markets for our agricultural products and our manufactured goods will be secured. These are needed by the people of all the States, but the South would reap the greatest benefit from the development of South American trade.

SALEM, VA., furnishes one of the best examples of the results which may be accomplished by strong management, based on available location. The record of the 10 months, beginning with the organization of the Salem Improvement Co., in October, 1889, is told in a pamphlet recently issued by that company. By actual count, 228 houses, including 159 residences, 35 buildings for stores and offices, and 34 for manufacturing enterprises have been erected or are in course of erection, and the amount expended in building during 1890 is expected to be about \$1,000,000. The number of operatives required for the industries already established and secured will be from 2,000 to 2,500, upon which is based the estimated increase of the population from 4,000 to a total of 8,000 within a year from this date. The desirability of the town as a place of residence, on account of its healthfulness, equable climate, educational advantages and fine society, will contribute very greatly to its growth. The Salem Improvement Co. and the dozen other strong land companies are united in the work for the upbuilding of this most promising Virginia city.

GO SOUTH.

There the Schuylkill Iron Men May Recoup.

Transportation Charges Have Eaten Them Up, From the Very Necessity of the Case—The Railroads Not at Fault—Natural and Irresistible Forces Which Are Transferring the Iron Interest to the South, Where Materials Are Near at Hand.

According to the Philadelphia Record, which is a reliable authority in such matters, the furnace and rolling mill industries of the Schuylkill valley are practically at an end. The conditions there do not admit of carrying on the business profitably, and its transfer to another section where transportation is not such a large part of the cost is only a matter of time. In looking about for the causes, the Philadelphia paper lays the blame largely on to the railroads and gives them a severe drubbing for what is called "extortion." These attacks are not well founded. It is the natural conditions which are destroying the iron industry in that section. Transportation charges are the effect and not the cause. It is scarcely likely, for example, that the Philadelphia & Reading, owning seven furnaces in the Schuylkill valley, would needlessly pursue a policy that would shut up five of them, as is now the case.

Anti-railroad crusades will accomplish nothing toward the revival of the ruined iron interests of Eastern Pennsylvania. The dismantled and abandoned plants simply mean that where such plants must pay for long hauls on their materials they cannot compete with furnaces like those in the South having coal, iron and limestone near at hand. The forces which are at work to transfer industries from bad locations in the North to good ones in the South are absolutely inexorable and irresistible.

We give the Philadelphia Record's own account of the situation in the Schuylkill valley:

The iron industry of the West and South has been growing at a mighty pace in the enjoyment of low costs of transportation on raw materials and still lower charges on the product. As an instance of this an iron manufacturer of this vicinity was urged recently to move his business to the South, and he was assured, with the guarantee of a contract, that the freight charges upon his materials and product should not exceed $\frac{1}{2}$ cent per ton per mile for either long or short distances. In the Schuylkill valley and surrounding regions the charges for similar traffic range from 1 to $2\frac{1}{2}$ cents per ton per mile. For eight anthracite coal furnaces given in Carroll D. Wright's recent report the average transportation on anthracite coal was 106 miles, and the average freight paid was \$1.24 per ton.

Evidences of the results are apparent to anybody who passes through the Schuylkill valley, even if it be no more than a flying trip in the cars. Idle, abandoned and dismantled furnaces may be seen on every hand as monuments of great enterprises that have been wrecked. Within the past ten years a full score of furnaces in the Schuylkill valley have been abandoned, while during the same period only a single

stack has been erected in the valley proper, the Pottsville Iron & Steel Co. having built one new stack this year to replace an old and small furnace. The furnace of the Chester Rolling Mill Co., at Thurlow, Delaware county, which was built nearly ten years ago, can hardly be considered as in the Schuylkill valley.

FURNACES CLOSING UP.

The work of destruction has been going on steadily, however, for many years without interruption. The Philadelphia & Reading Coal & Iron Co. owns seven furnaces in the Schuylkill valley. Two of them, the Norway, at Bechtelsville, in Berks county, and the Swede, at Swedeland, in Montgomery county, are leased and have been kept in operation most of the time by the lessees, although the Reading Railroad extorts as excessive freights from the lessees as from those who operate furnaces in which the company has no interest whatever. The two East Penn furnaces at Lyons, in Berks county, have been abandoned, and are now being torn down after years of idleness. The three other furnaces, at Kutztown, Port Carbon and New Ringgold, have not been in blast for many years, and their abandonment is now merely a formality and a question of time, as nobody seems to care to lease them. The Monocacy furnace, which is also owned by the Philadelphia & Reading Co., was demolished two years ago, and the Marion furnace, at Minersville, near Pottsville, in which the company owns the principal interest, is idle and as good as abandoned. The Philadelphia furnace, at Beach and Vienna streets, in this city, which was owned by S. Robbins & Son, was forced to suspend operations by the extreme high cost of anthracite fuel. The furnace was built only seventeen years ago, and it enjoyed the advantage of water transportation on its ore, much of which was brought from abroad. Anthracite fuel proved to be too costly at \$4 to \$4.50 per ton, and during recent years the furnace was operated only a intervals. When Hughes & Patterson bought the works of S. Robbins & Son a few years ago they abandoned the furnace, and last year it was torn down.

At William Penn P. O., in Montgomery county, there were three furnaces, which were owned by D. O. Hitner, by whom they were operated for a great many years. The Pennsylvania Schuylkill Valley Railroad bought two of the stacks in 1883 and tore them down to make way for its tracks, and the third was wrecked last year. No other furnaces have been built to take their places. The Plymouth Rolling Mill Co., of Norristown, once a flourishing concern and an employer of a large force of men, is now a thing of the past. The company failed in April of last year. Its rolling mill has been idle since that time, and is now reported as about to be dismantled. The two Plymouth furnaces at Conshohocken, which were operated by the company, are now being torn down, and the Lucinda furnace, at Norristown, which was formerly operated by the Plymouth Rolling Mill Co., has not made any iron for a long time, although it is now owned by other parties.

At West Conshohocken are the two furnaces of the Merion Iron Co., of which the late J. B. Moorhead was the president and principal owner. The furnaces have been out of blast for several years, and six years ago Mr. Moorhead, whose fifty years' experience in iron making in the Schuylkill valley qualified him to speak with authority, testified, in a communication to the Ways and Means Committee of the House of Representatives, that the actual cost of materials and labor, with no allowance for interest on capital and wear and tear of plant, was 50 cents per ton more than the market price of pig iron made. It is of interest to note that the price of anthracite pig iron is now \$1.75 less per ton

than it was when Mr. Moorhead made that statement. The Moselem furnace, at Moselem, Berks county, which was last operated by Liebrandt & McDowell, of this city, has not been in blast for about six years, and has been for sale during that period. But Schuylkill valley furnaces do not find purchasers readily.

ROLLING MILLS LIKEWISE SUFFERED.

Rolling mills have fared as badly in the Schuylkill valley as have blast furnaces. The Palo Alto Rolling Mill at Pottsville, which began operations nearly 40 years ago, and which was well equipped for the production of all kinds of railroad material, shut down about 10 years ago, and after lying idle for 4 years it was dismantled. The Standard Iron Works, in Norristown, which were in operation from 1857, and which for many years did a profitable business, shut down 3 or 4 years ago, and nearly all the machinery has been removed. The works are now dismantled and the company has wound up its affairs and gone out of business. These works did not owe their failure to any fault in their equipment or facilities, for the machinery has been purchased by mill owners in different parts of the country and added to works already in operation. The Port Carbon Iron Works at Pottsville, which were owned by the Philadelphia & Reading Coal & Iron Co., were last operated by the Pottsville Iron & Steel Co., but after the expiration of the lease the mill remained idle for several years, and was dismantled during 1888-89. The works of the Philadelphia Iron & Steel Co., at No. 939 North Delaware avenue, in this city, were established in 1845, but after 45 years of existence they succumbed to the ever-increasing disadvantages of this region and were dismantled four years ago. The Gray's Ferry Iron Works, at Gray's Ferry, were built in 1858 by Edward S. Buckley, who operated them until a few years ago, but although the product was a superior quality of charcoal iron, boiler plate and blooms, the mill became unprofitable, and was abandoned and dismantled two years ago. Mr. Buckley is the owner of a charcoal iron furnace near Monocacy, Berks county, which has been idle since 1884 and which has just been abandoned.

In a few days the Secretary of the Navy will be prepared to receive bids for the construction of either a timber dry-dock or a floating dock at the naval coaling station at Port Royal, S. C. The cost of the dock is limited to \$500,000. If a timber dock is constructed, it is to be 420 feet long on the floor from the head to the inner abutment floor, and 125 feet wide between the coping, midway from the ends. The floor is to be 50 feet in width, with a draft of 26 feet over the sill at mean high water. At the entrance of the dock the width is to be not less than 80 feet on the mean high water line. The dock is to have an inner and outer sill or groove for the caisson about 20 feet apart. The timbers which are to be exposed to the water are to be impregnated with creosote oil. There will be two main pumps which will have a capacity of 35,000 gallons per minute each, and one drainage pump to have a capacity of 4,000 gallons per minute. The dock is to be capable of sustaining with perfect safety the load brought on it by the heaviest vessel its dimensions will admit. If a floating dock is to be built, it will be of iron or steel and strong enough to raise a vessel 400 feet long, 75 feet beam, 26 feet draught and 11,000 tons in weight.

The first bale of this year's South Carolina cotton was sold a few days ago at Columbia at twelve cents per pound. It classed strictly middling. This is nine days earlier than the first bale last season, and two days earlier than for the past seven years.

MISSISSIPPI RIVER IMPROVEMENT.

Passage of the Bill Creating the Commission—The Eads Plan.

[Written for the MANUFACTURERS' RECORD.]

When the plan proposed by Captain Eads for making a permanent ship channel at the mouth of the Mississippi was first proposed, there were many engineers of eminence who doubted its feasibility, and some of them spent much time and labor in arguing against it. But after the great work had been accomplished and all that its ingenious inventor had promised had been more than fulfilled, the people of the upper as well as the lower valley were inspired with greater confidence than ever that human skill was equal to the task of confining the Mississippi within bounds that it should never pass, to the great advantage of commerce and to the reasonable security of life and property throughout all the extensive region subject to frequent overflows.

If this could be accomplished there was every reason why it should be undertaken at once, for the rapid growth of the Northwest and the consequent increase of its grain crops made more and cheaper transportation facilities an imperative necessity. From the head of navigation to Port Eads this was the dominant subject of thought and discussion among the people. "The wisdom of Congress should be invoked," said General Garfield, "to devise some plan by which the great river shall cease to be a terror to those who dwell upon its banks, and by which its shipping may safely carry the industrial products of 25,000,000 of people." The people, by popular petitions, by memorials from chambers of commerce and boards of trade, by resolutions passed by the State legislatures, did invoke the wisdom of the Forty-fourth Congress. A measure was introduced in that body April 26, 1876, authorizing the President to appoint a commission to improve the Mississippi river. This was referred to the committee on commerce, which invited Captain Eads to present his views as to the proper course to be pursued. That distinguished civil engineer had long been convinced that the conditions that existed at the mouth of the river prevailed throughout its entire length. In a pamphlet published by him in 1874 he stated that the chief portion of the sediment discharged by the river into the Gulf is carried in suspension, and "that the amount of this matter and the size and weight of the particles which the stream is enabled to hold up and carry forward depend wholly upon the rapidity of the stream, modified, however, by its depth." Later, in his review of Humphrey's and Abbot's report on the physics and hydraulics of the Mississippi, he argued on this basis, showing the relation between the current and the suspended sediment, and then demonstrating the practicability of deepening the river and lowering the floods without the use of waste weirs or outlets. Following the same line of argument before the committee, "he held that by applying the jetty system to the river, confining its waters in their highest stages and contracting the channel where unduly wide and protecting the banks against caving, works wholly practicable and inexpensive, a uniform channel might be obtained affording deep water all the year round for the largest vessels to St. Louis, and at the same time and by the same means the slope or flood surface would be so lowered as to prevent destructive floods—floods destructive not only to commerce and trade and the vehicles of transportation, to life and property on the river, but destructive of all government, of all industry, of the property, the earnings, the schools, the churches, the very existence of organized society throughout the wide alluvial region."

In concluding his exhaustive argument Captain Eads said:

"There can be no doubt of the entire feasibility of so correcting the Mississippi river from Cairo to the Gulf that a channel depth of 20 feet during the low-water seasons can be permanently secured throughout its entire course, and that the alluvial lands on each side of its waters can be made absolutely safe from overflow without levees by such correction. This can be accomplished for a sum entirely within the ability of the government, and one really insignificant when compared with the benefits which would flow from such improvement."

Until such work is accomplished an annual expenditure for the maintenance of the levees is imperative."

It is proper to say that there were some distinguished civil and military engineers, as well as some steamship captains and others doing business on the Mississippi, who held contrary opinions and argued against those of Captain Eads with much earnestness and plausibility. But his views continued to gain ground the more they were criticised, and the emphatic declaration with which he concluded undoubtedly led Congress eventually to enact the law establishing the Mississippi river commission.

The Forty-fifth Congress, early in its session, enlarged the scope of the committee on levees by adding to its title "and improvements of the Mississippi river," thus enabling it to take jurisdiction of all legislation on these subjects. Many measures were introduced and referred to this committee, which finally framed a substitute for them all, entitled, "a bill to provide for the organization of the Mississippi river improvement commission, and for the correction, permanent location and deepening of the channel and improvement of the navigation of said river and the protection of its alluvial lands."

There were many in and out of Congress who were willing that whatever money was necessary should be appropriated for improving the commerce of the stream, who were at the same time opposed to any expenditures for the protection of the alluvial lands. The idea was industriously circulated by the opponents of all measures for improving the Mississippi river, that this bill was an attempt in disguise to recover and give value to immense areas of land belonging to private owners, and these insidious attacks had unquestionably considerable effect upon people who lived in other sections remote from the valley, and were unacquainted with its condition and needs. Two Massachusetts representatives, Messrs. Robinson and Banks, each, in advocating the commission bill, explained the necessity for the proposed action. Mr. Robinson said:

"The committee have found these two subjects to be interdependent. They have not seen in the investigation they have given that the one necessarily stands apart from the other. All the writers and all the engineers from whom they have heard declare that in some measure, greater or less, the protection of the lands has also an influence upon the navigable character of the river. * * This bill is intended to provide a commission to devise a plan for the improvement of the Mississippi river and the protection of the alluvial lands combined. If as a part of the whole plan for the improvement of the river for the purposes of navigation, and incidental thereto, the lands of the valley may be protected, I am in favor of it."

General Banks, whose campaigns on the lower Mississippi and its tributaries had familiarized him with its conditions and needs, supported the bill ardently, and with patriotic breadth characteristic of that statesman, he said:

"I have already stated that the improvement of the alluvial lands is incidental to

this work. It cannot be separated from it. No declaration or act of Congress can prevent it. If we make the river what it ought to be we will make 40,000,000 acres of the best cotton and sugar lands on the face of the earth in consequence of the necessary improvement of the river—40,000,000 where now only 1,000,000 exists. It is inseparable from it and incidental to the improvement of the river."

Hon. Randall L. Gibson, then a representative, but now a senator from Louisiana, who from the beginning has been one of the most intelligent and indefatigable advocates of Mississippi river improvement, said:

"A jetty is a levee, in the popular sense of the word, within the bed or channel of the river, while a levee is a jetty on the bank of the stream. This plan rests upon the theory that in sedimentary rivers, in the Mississippi particularly, as the water is confined its velocity and depth is increased and the surface lowered, and that thus two great objects may be accomplished by one and the same method, namely, 'ease and safety' to navigation and protection to the industrious people on the banks from the dreaded floods."

But notwithstanding the earnestness of the friends of the measure and the unanswerable arguments urged in its favor, the bill failed.

At the extra session of the Forty-sixth Congress several new bills were modeled on that which failed, but limiting the field of work. These were followed by one prepared by Representative Gibson, of Louisiana, introduced May 10, 1879, entitled "a bill to provide for the appointment of a 'Mississippi River Commission' for the improvement of said river from the head of the passes near its mouth to its headwaters." This measure was sent to the committee, was favorably reported back to the House, which passed it the first week in June, with but 20 votes against it. In the Senate it was amended in some unimportant particulars, and then passed with but four adverse votes. The House accepted the Senate amendments, the bill was sent to the President, and was approved June 28, 1879. The following is a verbatim copy of this important measure:

[PUBLIC—No. 34.]

"An Act to Provide for the Appointment of a 'Mississippi River Commission' for the Improvement of Said River from the Head of the Passes near its Mouth to its Headwaters.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That a commission is hereby created, to be called 'The Mississippi River Commission,' to consist of seven members.

Sec. 2. The President of the United States shall, by and with the advice and consent of the Senate, appoint seven commissioners, three of whom shall be selected from the Engineer Corps of the Army, one from the Coast and Geodetic Survey, and three from civil life, two of whom shall be civil engineers. And any vacancy which may occur in the commission shall in like manner be filled by the President of the United States; and he shall designate one of the commissioners appointed from the Engineer Corps of the Army to be president of the commission. The commissioners appointed from the Engineer Corps of the Army and the Coast and Geodetic Survey shall receive no other pay or compensation than is now allowed them by law, and the other three commissioners shall receive as pay and compensation for their services each the sum of \$3,000 per annum; and the commissioners appointed under this act shall remain in office subject to removal by the President of the United States.

Sec. 3. It shall be the duty of said commission to direct and complete such surveys of said river, between the Head of the

Passes near its mouth to its headwaters as may now be in progress, and to make such additional surveys, examinations and investigations, topographical, hydrographical and hydrometrical, of said river and its tributaries, as may be deemed necessary by said commission to carry out the objects of this act. And to enable said commission to complete such surveys, examinations and investigations, the Secretary of War shall, when requested by said commission, detail from the Engineer Corps of the Army such officers and men as may be necessary, and shall place in the charge and for the use of said commission such vessel or vessels and such machinery and instruments as may be under his control and may be deemed necessary. And the Secretary of the Treasury shall, when requested by said commission, in like manner detail from the Coast and Geodetic Survey such officers and men as may be necessary, and shall place in the charge and for the use of said commission such vessel or vessels and such machinery and instruments as may be under his control and may be deemed necessary. And the said commission may, with the approval of the Secretary of War, employ such additional force and assistants, and provide, by purchase or otherwise, such vessels or boats and such instruments and means as may be deemed necessary.

Sec. 4. It shall be the duty of said commission to take into consideration and mature such plan or plans and estimates as will correct, permanently locate and deepen the channel and protect the banks of the Mississippi river; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade and the postal service; and when so prepared and matured, to submit to the Secretary of War a full and detailed report of their proceedings and actions, and of such plans, with estimates of the cost thereof, for the purpose aforesaid, to be by him transmitted to Congress; provided, that the commission shall report in full upon the practicability, feasibility and probable cost of the various plans known as the jetty system, the levee system and the outlet system, as well as upon such others as they deem necessary.

Sec. 5. The said commission may, prior to the completion of all the surveys and examinations contemplated by this act, prepare and submit to the Secretary of War plans, specifications and estimates of costs for such immediate works as, in the judgment of said commission, may constitute a part of the general system of works herein contemplated, to be by him transmitted to Congress.

Sec. 6. The Secretary of War may detail from the Engineer Corps of the Army of the United States an officer to act as secretary of said commission.

Sec. 7. The Secretary of War is hereby authorized to expend the sum of \$175,000, or so much thereof as may be necessary, for the payment of the salaries herein provided for, and of the necessary expenses incurred in the completion of such surveys as may now be in progress, and of such additional surveys, examinations and investigations as may be deemed necessary, reporting the plans and estimates, and the plans, specifications and estimates contemplated by this act, as herein provided for; and said sum is hereby appropriated for said purposes out of any money in the treasury not otherwise appropriated.

Approved June 28, 1879."

When the amended bill reached the House from the Senate and was called up for final consideration, Mr. Gibson briefly explained its scope and purposes. After describing how at certain seasons sand bars and snags close the navigation of the river, and how at other seasons the river becomes a mighty roaring torrent, destructive not only to human life and property, but destructive to the commerce and trade upon

its waters; and how these floods cause such changes of the channel itself as to threaten the isolation of such thriving cities as Vicksburg and Natchez, that have become what they are because they are river ports; and after referring to the immense losses by destruction of steamers and barges, in which the commerce of the river is floated, and to the frequent wrecking of large and small craft by these floods, Mr. Gibson said:

"At night and in storms there is absolutely no protection. It is estimated that these extraordinary perils impose a tax of not less than \$10,000,000 annually on the increased rates of insurance alone. We know what the difficulties are. They have been surveyed and reports made of them to Congress. But no complete and comprehensive system for their removal has been submitted to this House or to the country.

This commission is created with the hope that they may devise some plan, economical, feasible, and complete, that shall give us deep water at all seasons of the year, and prevent these destructive floods, so ruinous, not only to the country through which it flows, but to the mighty commerce that carries the productions of the teeming millions who inhabit the great valley to the market of the world and brings back in exchange the wealth of other countries.

Mr. Speaker, I do not, I cannot, believe any gentleman will be disposed to vote against reasonable and just appropriations for wing-dams, jetties, and levees, should this commission, after a thorough and scientific examination of the subject, report that these are the appropriate and necessary instrumentalities to deepen and correct the channel, to prevent destructive floods, to afford safety and ease to navigation, and facilities to trade and commerce upon our great inland sea; that they are, in fact, to the Mississippi river what water-gaps, sheltering piers and harbors, and light-houses and beacons and buoys are to the sea and lake coasts.

Would you decline such appropriations so clearly constitutional under the power to regulate commerce, when they are smaller in proportion to the commercial interest at stake than upon the ocean or the like, because at the same time they would protect the hardworking and industrious people in the mighty valley against overflows, or because they would reclaim the most productive region on this continent and secure to it an intelligent, vigorous population to develop its inexhaustible resources and contribute to the strength and glory of our country."

Georgia Saw Mill Association.

ATLANTA, GA., August 15, 1890.

Editor *Manufacturers' Record*:

The Georgia Saw Mill Association will hold its regular meeting at Macon, Ga., Tuesday, 28th October, 1890. The main feature of the meeting will be the adoption of a proposed law regulating the inspection and sale of lumber. The bill which the meeting will approve will be introduced at the next legislature of Georgia, and will in all likelihood be passed without any modification.

With a special view of establishing a uniform system of inspection in States throughout the Southern yellow pine belt, operative saw mill men from Alabama and Florida are earnestly requested to meet with the Georgia people in Macon on date named above. It is expected that similar bills will be passed at the next meeting of the legislature of the three States.

The need of a more thorough method for the conduct of the lumber traffic is generally felt, a system sanctioned and upheld by law. All saw mill owners and operators in the South and Southeast are requested to meet in Macon on the 28th of October next. Special railroad passenger rates will probably be secured.

C. J. HADEN, Secy.

INSURMOUNTABLE ADVANTAGES.

The South Slowly but Surely Taking Possession of the Pig Iron Markets.

The MANUFACTURERS' RECORD's special articles summing up Commissioner Wright's report have attracted widespread attention, as a conclusive and unanswerable substantiation of what we have claimed for years. Mr. Wright's figures point unmistakably to Southern supremacy in iron making. The South's advantages cannot be overcome by any other section. As corroborative of our construction of these official reports, we give the following from the conservative Philadelphia Record:

Iron manufacturers in this State have had their eyes opened pretty wide by the figures in the preliminary report on the costs of making iron that has recently been submitted to Congress by Carroll D. Wright, the commissioner of labor. To Pennsylvania iron makers, perhaps the most interesting feature of the report is the revelation that is made concerning the costs of production in the Southern States. The details are given so fully that it is easy to determine with exactness the character and extent of the advantages possessed by the Southern iron manufacturers that do not exist in other sections of the country. Of the furnaces, for which the figures of cost refer to the average product, or "run of furnace," as it is termed, twenty-five represent the South and an equal number are taken from the North, most of them from Pennsylvania. The figures of cost as given for these furnaces compare as follows:

NORTH.			SOUTH.		
No.	Cost.	No.	Cost.	No.	Cost.
1.	\$13.21	1.	\$9.63	1.	\$9.63
2.	12.82	2.	10.27	2.	10.27
3.	13.24	3.	11.74	3.	11.74
4.	14.61	4.	11.31	4.	11.31
5.	14.84	5.	8.55	5.	8.55
6.	13.69	6.	11.78	6.	11.78
7.	13.17	7.	9.88	7.	9.88
8.	15.59	8.	10.88	8.	10.88
9.	15.45	9.	12.81	9.	12.81
10.	13.80	10.	9.44	10.	9.44
11.	12.42	11.	9.16	11.	9.16
12.	15.75	12.	10.61	12.	10.61
13.	13.62	13.	10.82	13.	10.82
14.	14.59	14.	11.15	14.	11.15
15.	14.52	15.	9.93	15.	9.93
16.	14.08	16.	10.16	16.	10.16
17.	12.78	17.	10.16	17.	10.16
18.	13.60	18.	12.07	18.	12.07
19.	14.02	19.	10.02	19.	10.02
20.	13.67	20.	12.40	20.	12.40
21.	13.00	21.	9.63	21.	9.63
22.	14.75	22.	12.91	22.	12.91
23.	13.01	23.	10.48	23.	10.48
24.	14.86	24.	11.39	24.	11.39
25.	14.20	25.	11.52	25.	11.52

The elaborate details of the elements of cost which are given in each case show that the Southern manufacturers enjoy the advantage of cheaper materials and smaller expenses for the assembling of their ore, coke and limestone. In many instances the Northern furnaces get their coke cheaper, but the heavy freight charges on their ore and limestone more than discount this advantage. It is shown that many of the Southern furnaces get all their raw materials within a radius of a few miles of the works, and in several instances mine their ore, coal and limestone on the furnace grounds and make their coke on the spot. On the other hand, most of the competing furnaces in the North have to gather all their materials from distant points.

The importance of this element of cost becomes more apparent when it is shown that freight charges paid by many of the iron manufacturers in Eastern Pennsylvania upon their raw materials amount to more than the cost of those materials and the labor required to convert them into iron. Among 18 Southern coke-iron furnaces, for which complete figures are given, there is

but one that pays for the transportation of its materials over 25 per cent. of the total cost of the iron produced, and this is evidently a rare instance, as the average of the Southern freight charges is about one-half of this amount. In one instance the cost of bringing together all the materials for making a ton of iron is given at 29 cents, or 3.07 per cent. of the cost of the iron. In another case the freight on materials amounts to 84 cents, or 9.84 per cent. of the total cost. The average cost of making iron at 18 Southern furnaces is \$10.70 per ton, and the average cost of assembling the materials is but \$1.75 per ton of iron made, or 16.37 per cent. of the entire cost.

The figures for the Northern furnaces make a showing that is startling in comparison with this. Among 11 Pennsylvania coke furnaces one is able to bring its materials together for a ton of iron at a cost of \$1.63, but this is a Western Pennsylvania plant that makes its own coke in the midst of the Connellsville region, and mines its own ore and limestone within a few miles of the furnace. The freight paid by other furnaces range up to \$5.87 per ton of iron made, or from 19.05 per cent. to 44.98 per cent. of the total cost. The average cost of the iron made by these 11 Northern coke furnaces is \$13.79 per ton, while the average cost of assembling the materials for one ton of iron is \$4.24, or 30.75 per cent. of the cost of the iron made.

While the market price of anthracite pig iron has declined nearly 50 per cent. in the last ten years, the costs of materials and labor and the rates of rail transportation on raw materials have suffered little diminution, and remain at present at a point that threatens extinction to the anthracite iron industry.

There are only eight anthracite furnaces in Mr. Wright's lists for which full figures are given. The average cost of the iron made by these furnaces is \$15.01 per ton, while the cost of assembling the raw materials for a ton of iron averages \$5.07, or 33.78 of the total cost. Two of the furnaces paid over \$8 per ton in freights, or more than one-half of the cost of the iron that they made; one paid \$5.61, or 38.41 per cent., and the others paid from about 29 to 30 per cent.

The Southern manufacturer, paying a minimum of charges on his four or five tons of material, saves enough to pay for sending his one ton of product to a market that is hundreds of miles distant in the North, and at the very doors of his competitor. Cheap transportation of pig iron by water also facilitates the competition of the Southern manufacturers who are sending their product in large quantities to all Northern points on or near the seacoast.

Notes from Gaffney City, S. C.

GAFFNEY CITY, S. C., Aug. 14, 1890.

Editor *Manufacturers' Record*:

The town council of Gaffney City wish to correspond with parties in regard to water works. Write to N. Lipscomb, indentant, or W. H. Richardson, clerk of town council, for information.

The directors of the Gaffney City Land & Improvement Co. held a meeting in their office here on August 14th. A satisfactory report was made by the president, lands having been sold at satisfactory prices. There is no more desirable place to live in than Gaffney City. It has the very finest schools and colleges. There are 350 pupils when all the schools are in session.

The Gaffney City Land & Improvement Co. are prepared to sell homes to parties wishing them, both in and outside the corporation of Gaffney City on reasonable terms.

The population of Gaffney City at the last census was 1,631; in 1880, 400—an increase of over 400 per cent. in the last ten years.

A. N. W.

A Week's News From Middlesborough.

MIDDLESBOROUGH, KY., Aug. 13, 1890.

Editor *Manufacturers' Record*:

A railroad item of considerable interest is that the Nashville, Chattanooga & St. Louis Railroad will be extended to Middlesborough as rapidly as the work can be done. The road is already built from Nashville to Cookeville, Tenn., a distance of over 70 miles. Messrs. Allison, Shafer & Co., contractors and constructors, of this place, have the building of the road, and they will push it to completion as rapidly as possible. These same parties have also secured a contract to locate the line from Keathley to Clinton and then up Clinch river to Cumberland Gap. This will be an important line in many respects, for it will develop a section rich in natural resources, the idea being to form another connecting link with the East.

The work of extending the Belt Railroad from Middlesborough to Big Creek Gap, in Tennessee, a distance of 25 miles, is being pushed with the utmost rapidity. This will give another entrance into Middlesborough for the James Road, which it is proposed to build from Chattanooga to this city.

The Kentucky Press Association will visit Middlesborough on September 10, coming here in a special train of palace cars from Louisville. They will spend several days here, and a most delightful and interesting programme has been arranged for their entertainment. A banquet will be given them at the famous Middlesborough Hotel, and excursions on the Belt line, the dummy line and the electric street cars, with visits to the Pinnacle, the Gap and King Solomon's Caves being the principle features of the occasion. It is thought that fully 200 members will be in the party.

Mr. Alex. A. Arthur returned to Middlesborough a few days ago much improved in health, and is again at work doing gigantic things in connection with enterprises in the city he has founded. When he returned here from Europe in May he brought with him \$250,000 to be used immediately for building purposes. The houses contracted for then are now being built as rapidly as material can be furnished, and most of them are fairly under way. Mr. Arthur has just received another cablegram from England instructing him to invest an additional \$150,000 in business houses and residences in this city. This, added to what is being done by private individuals, will, as a matter of course, give Middlesborough a big building "boom," and many of our people who are obliged to seek shelter in tents and at various hotels will find comfortable buildings at their disposal before winter fairly sets in.

The many friends of Mr. Theodore Harris, president of the Louisville Banking Co., and newly-elected president of the First National Bank of this city, will regret to learn of the sudden death of Mrs. Harris at Carlsbad, Germany.

The old historic place, known the country over as Cumberland Gap, was rechristened last year Dillwyn Springs, but the new title proved so unpopular that at a recent meeting to incorporate the new town a vote was taken, and the original name of Cumberland Gap was almost unanimously adopted. This will necessitate a change on the railroad maps, as the new name has already taken the place of the old one.

Business on the other side of the mountain at Cumberland Gap is progressing most favorably, and a large number of new buildings are being erected for stores and residences.

The bank at Cumberland Gap has been organized with a paid-up capital of \$50,000, and it will commence business early next week. The officers and directors of this institution are: President, A. B. Kesterson; vice president, Alex. A. Arthur; cashier, J. E. Lauck. The directors are the above three gentlemen, with the names of C. H. Rogers, E. M. Quillan, Frank Watts and J. W. Divine added.

Mr. Alex. A. Arthur has organized a strong hotel company, and plans are now completed for a beautiful hotel on "Mountain Hill" at Cumberland Gap, the same to cost \$30,000.

GENERAL NOTES.

THE Salem Development Co. had its first sale of lots on the 13th inst., and it was one of the most successful yet held in the South, many lots bringing considerably higher figures than the list prices. The aggregate of sales reached \$151,000. The total number sold was 257, the average price being \$600 per lot. After the sale the stock of the company advanced considerably, and now commands a good premium. The successful result of this sale indicates the public appreciation of what has already been accomplished at Salem and confidence in its future.

DR. NORMAN ROBINSON, State chemist of Florida, has a letter of recent date from Prof. Lawrence C. Johnson, assistant geologist in charge of the United States geological survey in Florida, which mentions briefly the work done in Florida during the past four months. Prof. Johnson states that after finding the phosphate discoveries absorbing all other questions in the popular mind, he suspended his detailed geological work and confined his attention principally to visiting localities of actual or reported discovery with a view to ascertaining the classes, quantity, modes of deposit, the genesis and actual progress of mining the phosphates. He writes that the Dunnellon and Withlacoochee beds are the leading deposits, so far as known, of the compact phosphates. Of the Fort Meade phosphates Prof. Johnson says that the material is of a different class from that at Dunnellon, consisting essentially of nodules of nearly pure phosphate of lime in a matrix or mother rock of less grade. He is of the opinion that with ordinary skill and energy, backed by capital, the fertilizer manufacturing enterprise recently started at Fort Meade is bound to be a success. He also speaks in high terms of the new discoveries in Levy, Lafayette, Taylor and Jefferson counties. "Phosphates of lime are not all the minerals and valuable natural products of Florida," writes Prof. Johnson. "There are seeming clays which contain other valuable ingredients. One is a phosphate of alumina in Marion county which will yet be valuable for the double purpose of producing phosphoric acid and mercantile alum." Prof. Johnson says there are in Florida large developments of eocene limestone, changed by a disintegration of the shells and a disposition of calcite into a pretty compact marble, applicable to all purposes of that material except the finest ornamental work. He says that such building stone is sufficiently plentiful to be the basis of an industry. This stone is found in abundance at Gainesville, Chattahoochee and at Rock Bluff, on the Apalachicola river. The professor also calls attention to the Gainesville paving rock, which, he says, is so abundant, is so accessible, and has so many valuable properties as a paving or macadamizing material, that it ought to be known and in more general use. This rock is what is commonly known as the soft "chimney rock."

A DISPATCH from Fall River, Mass., reading as follows, confirms the predictions of the MANUFACTURERS' RECORD a few weeks ago: "The curtailment of production generally went into effect this morning. Nearly three-quarters of the corporations, including the Annawan, Bernard, Crescent, Cornell, Chace, Durfee No. 2, Flint, Fall River Manufactory, Granite Nos. 1 and 2, Hargraves, Laurel Lake, Merchants', Metacommet, Mechanics', Osborn, Pocasse, Robeson, Richard Borden Manufacturing Co., Seaconset, Shore, Slade, Stafford, Troy and Union Mills shut down this morning for 60 hours. The American Linen Mills, which has already been closed for some days, is still silent. The Wampanoag runs

to-day, but closes to-morrow. The Sagamore Co., which had one mill closed, also Durfee Mills Nos. 1 and 2, ordered in the help this morning. This will take off about 190,000 pieces of goods. Several of the mills paid off Saturday, but the most will pay during the week or next Monday in order to retain their hands. Crowds of operatives are on the streets, and the city has a holiday appearance."

DR. JOHN F. CROWELL, president of Trinity College, which is soon to be removed to Durham, N. C., writes concerning the publication of a new magazine at the latter place: "Myself and others have organized a company called the Educator Co. at Durham, N. C., for the purpose of publishing a first-class Southern educational journal. We propose to do for the educational field what the MANUFACTURERS' RECORD is doing for the industrial field." The capital stock of this company is \$2,200, with privilege of increasing to \$5,000. In appearance the magazine will resemble the New York Nation, and will be issued monthly. The first issue is to appear shortly. The board of directors of this company include John F. Crowell, president; W. A. Blair, of Winston, N. C., secretary and treasurer; Julian S. Carr, B. N. Duke, T. J. Jarvis, J. H. Southgate, P. P. Claxton and E. P. Kennedy.

THE Buena Vista (Va.) Pulp & Paper Mills, recently completed with modern equipment, are operating successfully. This plant can make paper, it is said, so as to undersell most Northern mills in their own territory. It has very fine pulp and excellent, unfailing water-power, which costs 75 cents a day. B. C. Moomaw, who owned the farm on which Buena Vista is now built, is president of the company and takes great interest in the paper mill, and L. A. Sadler, the general manager, is one of the smartest men in the business. They are "figuring fine" on paper manufacturing, which seems to be in a revolutionizing state, and before contemplated enlargements and improvements are made, will find out whether sulphite, cotton hulls or something else is to be the material upon which the paper making of the future will be based.

THE Norfolk Virginian has increased the size of its issue and now appears as an eight-page, fifty-six column paper. The Virginian is one of the leading journals of the South, and may be classed as the representative paper of its section. It entered upon the 25th year of its existence on November 21 last, and has more than doubled its circulation in the past eight years. A new Web perfecting press has been added to its plant, together with other modern newspaper machinery which greatly increases facilities.

THE MANUFACTURERS' RECORD is in receipt of the premium list of the Texas State Fair and Dallas Exposition, which opens October 18 and closes November 2. This is one of the big events of the fall season in the Southwest, and the reduced rates given by the railroads, together with the opportunity of seeing Dallas at its best, will doubtless attract a large crowd from all over the country. The premiums and purses this year amount to \$75,000.

WITHIN the past week two reports have been made public containing descriptions of caves just discovered. One of these comes from Normandy, Tenn., and describes a subterranean cavern as follows: "There is intense excitement at this place over the discovery of a cave that, so far, seems to surpass the Mammoth Cave in size and grandeur. A few mornings ago, as a party of gentlemen were inspecting the country 2½ miles southeast from this place, and directly between here and Tula-homa, they accidentally discovered the

entrance. Previously there had been heavy rains, and the people had been awakened a few nights before by a rumbling sound in the earth. The mouth of the cave seems to have become exposed by a slide of dirt and rocks from the side of the hill. The party entered the cave and walked a good distance by the light from the mouth, which is about 8 feet in height by 12 in width. They, having no light to go further, returned to Normandy, got lanterns, and then went back to the cave, arriving there about 5 o'clock in the afternoon. They walked in what seemed to be a direct line all night, but found no end. There was a small creek running through the cave from northeast to southwest. The walls were very high and seemed to be smooth, except here and there stalactites hung from the roof to the floor. The distance traveled could not have been short of twenty miles. Retracing their steps, they arrived at the mouth at 4 o'clock Wednesday afternoon. They say there seemed to be no end to the cave. In some places the passage is hundreds of feet wide. As the mouth of this cave lies at the foot of what is known as the table-lands or barrens, it is believed it extends under the whole table land." The other discovery occurred in Virginia. The cave found there is evidently not so large in its proportions as the one in Tennessee. The Virginia cavern was discovered in Strasburg, Shenandoah county, Va., on the property of a Mr. Spengler. On this land is a hill. For the past year Mr. Spengler, who uses this hill for grazing, thought it contained a large cave. About the center of the hill there is a very large hole, say about forty feet in diameter, which inclines gently toward the center. A few weeks ago Mr. Spengler and his two sons began to excavate at the bottom of the hole in search of the cave. After cutting through a great thickness of limestone they came upon a large and beautiful chamber, which contains a great variety of stalactites and stalagmites, which are full of splendor. This chamber is said to be 100 feet long by 50 feet wide, and it is very high. The report states that it also contains a perfectly formed elephant and a beautiful cathedral, which is forty feet high and has a very large auditorium. The cathedral does not run up from the floor of the chamber, but after ascending a ladder about 25 feet you get into the bottom of the cupola. After then climbing up the wall about five feet you come to the auditorium. The whole cathedral is one mass of beautiful formations. The whole chamber that I have just described is very beautiful, but at present its beauty cannot be appreciated, because the formations are covered with a clay soil. The temperature is moderate. Mr. Spengler has attained an entrance to another chamber, which contains many beautiful formations and a large lake, which he has explored forty feet. He thinks that the lake is the source of a beautiful spring at the foot of the hill. He has also discovered another about three hundred yards from those, but in order to get at the entrance of this one it is necessary to descend into a pit, which is full of formations. The formations in this cave are all perfectly white. At one end it has an incline of sixty feet, at the top of which a person will be three feet from the earth's surface. The caves are near the junction of the Virginia Midland Division of the Richmond & Danville Railroad and the Baltimore & Ohio.

By no means will the ship-yard at Sparrow's Point, Md., be an unimportant portion of the Pennsylvania Steel Co.'s plant at that place. The ship-building establishment there will be one of the most important in the country, its admirable location greatly serving to further its prominence. There are now two blast furnaces producing 500 tons of pig iron daily. This is soon to be increased to 1,000 tons by the

addition of two other furnaces. A separate department is connected with the ship-yard where a small army of marine draughtsmen are to be employed to make working drawings of the vessel to be built. In the construction plant proper is an immense tool shed 435 feet long and 140 feet in width. This building it is intended to double in length. The blacksmith shop is 200x70 feet, equipped with steam hammers, blowers, etc. Some of these hammers weigh four tons. There are eight building slips, where the keels are to be laid and the plates riveted on. They are capable of laying down ships of from 350 to 600 feet long. The woodworkers' department comes next, and will include a building 184x63 feet with an addition 75x21 feet. The addition will be used for spar-making. There are to be two fitting-out docks. One of these is nearly completed. Liquid fuel will be extensively used in furnaces and forges. It is more economical and preferable in every way. A dry-dock is contemplated. This, if built, will be capable of receiving a vessel 600 feet long. Everything in the company's works has been planned with a view of extending it at some future time; consequently when the time comes for enlargement no difficulty will be met with. All the buildings are supplied with temporary ends, so that additions may be built on with ease.

THE committee on adjustment of the Virginia debt announce that \$12,500,000 have been deposited up to date, under the agreement of May 12, 1890. The bonded debt is \$27,360,000. It is announced officially that no steps will be taken in the matter of adjustment until a majority of the bonds have been deposited with the committee.

FROM January 1 until July 31, 1890, the improvements along the line of the Cape Fear & Yadkin Valley Railroad have been marked. In Greensboro, N. C., the principal city on the Cape Fear & Yadkin Valley Road, 318 improvements have been inaugurated, including buildings erected. Among the principal items in the long list credited to that city are: 51 dwellings, 3 newspapers (2 weeklies and one daily), a brick and tile company, a \$500,000 security and investment company, a 4,000-spindle cotton factory, a \$100,000 investment company, an ice company, two \$500,000 land companies and a corporation with \$1,000,000 capital stock. On the entire line, excepting Greensboro, of that enterprising railroad, 1,015 improvements have been carried out. The most important include 10 barrel factories, 13 brick works, 16 churches, 695 dwellings, 6 hotels, 12 planing mills, 38 steam saw mills, 30 turpentine distilleries and 15 wheelwright shops. To the Cape Fear & Yadkin Valley Railroad Co. belongs great credit, not only in pushing development along its line of road, but in interesting itself in the results as it has done by collecting the above statistics.

MR. W. H. ARMSTRONG, the contractor who is erecting the large hotel at Rockwood, Tenn., for the Rockwood Hotel Co., has the building well under way, it now being up to the second story. About 20 men are employed, and the work will be completed about December 1. The hotel is 133x145 feet in size, and the lobby, office and dining-room are finished in oak. The company contemplates putting in water from a celebrated mineral spring. The water will have to be piped from a point on Walden's Ridge, 2½ miles distant. Mr. Armstrong writes that the prospect for building is good; one planing mill is being erected and another is soon to be built.

THE Darlington Manufacturing Co., of Darlington, S. C., has received an order for six car-loads of their standard sheetings, to be shipped to Shanghai, China. This order comprises about 600 bales.

FRONT ROYAL AND RIVERTON.

Two Ambitious Virginia Cities Have Joined Hands.

The Front Royal & Riverton Improvement Co.—A Place for the Investor, the Manufacturer, the Merchant, the Mechanic and the Laborer.

[Special Cor. MANUFACTURERS' RECORD.]
FRONT ROYAL AND RIVERTON, VA.,
August 6, 1890.

Judging from the surroundings, nature must have intended that a great manufacturing city be built at the junction of the North and South forks, where the beautiful Shenandoah river is formed—Front Royal and Riverton, in Warren county, Va. Here, where not many years ago contending armies met and laid waste the garden spot of the South, now a mightier host, equipped with the more peaceful weapons of capital and industry, is pitching its tents preparatory to the inauguration of a great war of industrial progress. The reason of the great importance of this point to the armies during the war between the States is the same that will give it a prominent place in the history of the railroad and industrial development of the Shenandoah valley, namely, the existence of two gaps in the Blue Ridge mountains, and the only two between the Potomac and James rivers through which railroads may be built at anything like a reasonable expense. Six lines have already been chartered to pass through Manassas and Chester's gaps, and by either route they are compelled by the very nature of things to run through the twin cities of Front Royal and Riverton. These towns are now the junction of two great Southern railroad systems, the Richmond & Danville and the Norfolk & Western. The last-named road is locating and will soon begin the construction of a line from this point to Washington; the Baltimore & Ohio is only ten miles distant, while the Cumberland Valley, headed in this direction, has reached Winchester, "eighteen miles away." It will not require the services of a prophet to foretell the future greatness of this place. Situated as it is in a valley of surpassing beauty, with a soil heaving with rich minerals of almost every description and a water-power sufficient to turn the wheels of the largest manufactories, combined with agricultural resources which are seldom equalled, the only thing necessary to insure success is capital and ordinary industry.

The initiative in the step of progress has been taken by the Front Royal & Riverton Improvement Co., an organization with a capital of \$500,000, and composed of gentlemen of high standing and sterling integrity. Hon. H. H. Downing is president of the company; George Wm. Cone, vice-president; C. H. Beatty, secretary; W. M. Johnson, treasurer, and Hon. S. S. Turner, attorney. Early in the summer the company purchased at farm-land prices 1,800 acres of fine land lying in and between the two cities with a view of developing the property, and also to induce worthy manufacturing enterprises to locate here. Their charter was not granted until June 5th, and it was not until then that any active work was performed. But inside of 36 hours after the books were opened all of the stock was subscribed by parties from New York to Texas, and before the first instalment was paid the stock was held at a premium of 12 per cent. Has any other place such a record? And all of this was accomplished without a dollar expended either for advertising or commissions. The plan of this company is positively unassailable. Every stockholder stands on the same basis, and the people have unbounded confidence in the integrity of the management.

I have no desire to create the impression that this is paradise, but I will say, and without fear of successful contradiction, too, that it is in the suburbs of that much cherished spot, if any place in America is. The climate is pleasant and healthy in summer and winter; the water is as pure as ever come from mountain stream. Fruits of every variety flourish here, and the Belmont vintage is celebrated abroad as well as at home.

Unlike many flourishing towns, Front Royal and Riverton are not compelled to build from the ground up. They have many substantial enterprises already in successful operation. Front Royal has the advantage of being the Warren county seat and has a population of 1,800. There are two substantial banks there having a combined capital of \$100,000, twenty mercantile houses, five manufactories, an excellent graded school with four departments, three hotels, three newspapers, cigar factory, tannery, an efficient fire department and four livery stables. While the present population of Riverton is only 700, she boasts of manufacturing establishments which few cities of the same size can afford. One of the largest industries is the Riverton Flour Mills, with a capacity for 125 barrels per day. This is probably one of the best mills in the State, and its product ranks with the highest grades in the South. The Confluence Lime Works is the largest in the South, and employs a large force of men the year around. Another company has been organized for the manufacture of lime and will be in operation soon. The Warren Manufacturing Co., manufacturers of all kinds of wood work, is located here, and another profitable business is the cooperage establishments, furnishing barrels to the lime works and mills. Besides these is a good hotel, a saw mill and grist mill.

This section abounds in iron and manganese ores, copper, lead, clays and ochre. The iron ores are said to be almost self-fluxing and to contain a very small percentage of sulphur and phosphorus, which advantages will readily be recognized by iron and steel manufacturers. The supply of timber, and especially oak, is very large, and building stone can be had at the door, so to speak. Capitalists from both the North and South are largely interested here, and I am confident that Front Royal and Riverton will give certain and ample returns for investments.

SAMUEL POLK.

THE London & New York Land Co., of Jellico, Tenn., offer to give to a reliable party or company who will erect a furniture factory, hub and wheel factory or wagon factory employing a large number of skilled mechanics, twenty-five acres of good land situated in the most desirable portion of the town. This land is said to be worth \$10,000. The company will also give monetary inducement and sufficient land to good, reliable men who wish to establish manufactories of any kind. Fuel and steam can be had at minimum cost, and water-power can soon be secured. Jellico is situated in a region where lumber of all kinds is found in abundance. The East Tennessee, Virginia & Georgia and Louisville & Nashville form a junction here giving magnificent railroad facilities.

GLYNN COUNTY, GA., in which Brunswick is situated, shows a startling increase in the value of its property for this year as compared with last. In real estate the increase is \$1,410,311; in bank stock \$224,000; in merchandise \$130,000; in stocks and bonds \$126,200; in iron works, foundries, \$10,000; in personal property \$110,000; in improved land \$20,000, and in wild land \$43,108, making a total increase in one year of nearly \$2,000,000—\$1,954,484 to be exact. Other items, such as street railroads, etc., which do not appear in the record, increase the above total about \$250,000.

Solid Growth of the South.

CHATTANOOGA, TENN., August 18, 1890.
Editor *Manufacturers' Record*:

The reports received from many of the new towns throughout the South are of a most encouraging nature. Such works as are completed are running full time and doing a good business, while new enterprises of various kinds are springing up all the time and in all directions, as if by magic.

In the large old cities of the South the growth is not, of course, so remarkable as in these new towns, but it is, nevertheless, going steadily on, and carefully compiled statistics from each of our large Southern cities show a large increase in population, capital and business, which is highly gratifying and satisfactory to all who have the interests of the South at heart. One important feature of all this development in the South—in fact the main point—is that it is solid. When a thinking, energetic business man, after investigating the resources and the prospects of the business future of the South, invests his capital and expends his energies in establishing some enterprise in this section, he does not do it to gratify a passing fancy, but because he finds here an excellent field for such an enterprise, and anticipates a steady and continuous prosperity.

Aside from the South as a business field, the South as a home is not unworthy of consideration. A salubrious climate, abundance of all desirable food products, good schools and hospitable, refined people render this section a most desirable locality for the establishment of a comfortable and pleasant home.

All of our old Southern cities have good streets, good lights, handsome public buildings, pleasure resorts and places of amusement suited to cultured tastes, fine systems of public schools, offering the best educational advantages, and churches of all denominations, and, judging from the amount of earnest energy and honest enthusiasm, together with the important and more solid element of capital, which are being put forth by the pioneer citizens of some of our infant towns, it will not be many years before they can boast of the same conditions.

The South is continually growing and improving in every way, and it is destined to become a great country.

From Buena Vista.

BUENA VISTA, VA., August 17, 1890.

Editor *Manufacturers' Record*:

A census recently taken here showed the population of Buena Vista to be 2,050. Of this number 383 were children of the school age. This is a very excellent record of about a year's growth. A little over a year ago the place was a farm with a luxuriant growth of wheat on it. Two new locomotives to be used by the iron company in hauling ore cars from the mines to the furnace have been received. This is the third locomotive received by this company within the last two months. The company has over 200 hands at work getting out ore to be used at the furnace, which is now nearly completed and ready to go into blast.

Over 200 houses are now under contract and being constructed here, and the most of them have already been spoken for by persons who contemplate moving here and going into business.

The egg crate manufactory and the woolen mills are being rapidly built, and work will be begun on the steel plant at an early day.

A large brick public schoolhouse is being built. When it is completed a regular graded school will be opened, and will be conducted by a principal assisted by three teachers. A female seminary is also

being erected, and will be opened for pupils September 23.

Work is progressing most satisfactorily on the new brick hotel here. This house is being built on the site of the hotel destroyed by fire here last month.

The new Colonade Hotel is now open for the reception of guests, and it is under the management of Capt. J. W. Talley.

A Celebrated Property.

The announcement in the MANUFACTURERS' RECORD that M. T. Scott, of Bloomington, Ills., had sold to an English syndicate the iron lands near Dover, Tenn., recalls some interesting history. The purchaser is an English syndicate, known as the Cumberland Lands, Limited, and the capital is \$1,250,000, of which Mr. Scott retains a large share.

The property comprises 46,000 acres, with a frontage of seven miles on the Cumberland river, 100 miles distant from Nashville, Tenn., and same distance from the mouth emptying into the Ohio river 12 miles from Paducah, Ky., known as the Cumberland Iron Works property, operated by Woods, Yeatman & Co., and partly owned by the late Hon. John Bell, who in 1860 was a candidate for President on the Bell and Everett ticket.

The iron made from the ore on this property in the old Dover and Bear Spring furnaces gave to Tennessee iron its reputation for high value. The iron was much used for making boilers, and no boiler made of this iron was ever known to burst. Cannon for the use of the Confederacy were made of it and were usually filled with powder for testing their strength, and even this never burst one of them. It was also shown at the World's Fair in London in 1851, and was awarded there the first premium over the iron shown in competition. The supply of ore on the property of brown hematite of highest yield in iron for hematite is thought to be abundant, and can be cheaply mined and delivered at moderate cost to the furnace which will be built near to the ore banks and limestone quarry. The timber is also very abundant, and the land has the quality to a great extent of reproducing, there being now on a part of the land the third growth, on other parts the second, and on 18,000 acres the virgin growth, which is very fine timber.

There are said to be upwards of 20,000 acres of rich land in the river and creek bottoms and on the hillsides, and on the Tennessee ridge, which divides the Tennessee and Cumberland rivers, eight beautiful streams rise on the land and run off into the two rivers. The property was always owned by gentlemen of great wealth and social prominence about Nashville, and was in the ante bellum days a great place of resort, where the finest Southern hospitality was dispensed to many guests every year. The property was sold to Mr. Scott early in 1888. The roads on the property were made, so it is said, at an expense of \$30,000, and many of them are lined with trees on either side for several miles, thus making beautiful avenues. The property will be made the resort of many English gentlemen of no less refinement, elegance and wealth. It is beautiful and attractive and of great value. The development will be very extensive, both as to furnaces and rolling mill and other means for using the pig iron. The conveyance was made the 2d of August, 1890, and as soon as practicable the work of preparation for development will be begun.

N. J. KINGMAN, Ocala, Fla., wants to correspond with parties who have wagon materials for sale.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

If you desire to establish

A COTTON MILL

where you will have every advantage that could be asked, Tredegar is the place. It is surrounded by a rich cotton district producing a fine grade of long staple cotton; it is one of the healthiest places in the South; labor is abundant and cheap; the purest freestone water can be had, and a cotton mill can get its raw material right at its doors. Fine steam coal can be secured at the lowest price, making steam cheaper than water-power. Transportation facilities are good, and everything that could be desired to make cotton manufacturing profitable is at hand. The old name of Tredegar, and the present name of the postoffice is Jacksonville. It is the county seat of Calhoun County, which produces thousands of bales of cotton annually and is one of the richest mineral and agricultural counties in Alabama. Its present population is about 2,500 to 3,000, but this will be greatly increased by the building of many new industrial enterprises. For information regarding Tredegar's advantages for cotton mills or other enterprises, address GOLDSMITH BERNARD WEST, General Manager, Jacksonville, Ala.

A Steel Plant to employ 3,100 hands has just been secured.

[For other information about Tredegar, see next page.]

Tredegar offers the most inviting field in the United States for the establishment of manufacturing enterprises.

It has Unequalled Advantages for

Iron and Steel Works, such as Furnaces, Rolling Mills, Machine Shops, Foundries and everything using iron.

Car-Wheel Works, Car Shops.

Cotton Mills, Knitting Factories, and other Textile Industries.

Cotton-Seed Oil Mills and Fertilizer Factories.

Woodworking Industries of every sort, Saw and Planing Mills, Sash, Door and Blind Factories, Furniture Factories, Handle and Spoke Factories, Agricultural Implement Works, Carriage and Wagon Factories, &c.

Brick Works for making Building Brick, Vitrified Brick, Fire Brick, &c.

Sewer Pipe Works.

And many other industries.

The most liberal inducements will be offered to those who desire to locate such industries.

*The Best Location in the Country
for New Enterprises.*

TREDEGAR, ALA.

Here Are Found :

The finest Hematite Iron Ores in the South.

Extensive Manganese Deposits that experts from Pennsylvania and elsewhere believe to be the greatest in the United States.

Vast Forests of Fine Timber, Pine and many varieties of Hardwoods.

Never-failing Mountain Springs with a daily flow of many million gallons of the purest Freestone water, besides Sulphur, Chalybeate and other Mineral Springs.

A climate that has no superior for all the year; malaria is unknown, and the nights are cool even in midsummer.

A Fertile Agricultural Country, where cotton, grains, grasses, fruits and vegetables yield abundant crops, and where fine Jerseys wade knee-deep in clover.

A population of 3,000, churches of all denominations, excellent schools, charming society.

A National Bank, Water Works, Fine Hotel, &c.

Steel Works, to include Furnaces, Rolling Mill, Rail Mill, Cotton Tie Mill, &c., and to employ 3,100 hands, under construction.

A Cotton-Seed Oil Mill and Fertilizer Factory under construction.

For particulars address GOLDSMITH B. WEST, General Manager JACKSONVILLE MINING & MANUFACTURING COMPANY, Tredegar (Present Postoffice, Jacksonville), Alabama.

*An Unequalled Field for
Profitable Investment.*

LAREDO, TEXAS.

The Gateway to and from the Republic of Mexico

Is nature's grand outlet for the manufactured products of the United States and nature's grand inlet for the mineral and raw products of Mexico. For the cheap delivery of the raw material necessary for the successful operation of iron and all textile industries, Laredo holds a position unsurpassed, every material being found in the immediate neighborhood. The very foundations of the city are upon inexhaustible coal beds, now being rapidly developed. A glance at the map will show that there are no large cities within hundreds of miles of Laredo, and her favorable geographical location, being from 600 to 800 miles nearer the trade centers of both republics than any other frontier port, stamps her as the commercial entrepot between the United States and Mexico.

Laredo is becoming a most important manufacturing point,

having the following industries already located and in operation:

Woolen Mill.
Wool Scouring Mill.
Tannery.
Boot and Shoe Factory.
Ore Concentrating Works.
Ore Sampling Works.
Cotton Gin and Milling Works.
Mineral Water Bottling Works.
Four Ice Factories.
General Car and Machine Shops of the Mexican National Railroad, the largest west of the Mississippi.
Three Large Brick-yards and several smaller establishments.
A large Cotton Factory is now being erected by a New England syndicate.

Laredo Offers to the Capitalist, Merchant, Manufacturer and Mechanic
Opportunities for Investment, Business or Manufacturing such
as no other City in the Southwest can offer.

The city is well supplied with railroad facilities and hotel accommodations, has Holly system of water works, two electric-light companies and one of the best equipped electric motor street railways in the United States.

Population.

1886.....	3,000
1888.....	6,000
1889.....	12,000

Imports and Exports.

1888.....	\$ 3,000,000
1889.....	10,543,000

For Maps, Pamphlets, Bird's Eye Views and Reliable Information of Laredo, address

THE LAREDO IMPROVEMENT CO.

KIMBALL.

MARION COUNTY,

TENNESSEE.

KIMBALL TOWN COMPANY.

H. I. KIMBALL,

Vice-Prest. & Managing Director.

DIRECTORS.

HON. LOGAN H. ROOTS, President of First National Bank, Little Rock.
CHARLES P. RICHARDSON, Capitalist, Chattanooga.
J. R. STEVENS, President First National Bank, Huntsville, Ala.
A. J. MORISON, Capitalist, London, England.
J. H. BRYANT, President Seattle Coal & Iron Co., New York.
GEO. COOK, President Hallet & Davis Piano Co., Boston, Mass.

HON. H. L. COCHRAN, Judge Probate Court, Fort Payne, Ala.
H. I. KIMBALL, Atlanta, Ga.

OFFICERS.

President, HON. LOGAN H. ROOTS.
Vice-President, C. P. RICHARDSON.
Second Vice-President and Managing Director, H. I. KIMBALL.
Treasurer, J. H. BRYANT.
Assistant Treasurer, ED. E. RICHARDSON.
Secretary W. E. DONALDSON.
Assistant Secretary, W. BROOKS COVELL.

ATTORNEYS.

W. E. DONALDSON, Kimball
SHEPHERD, WATKINS & BATES, Chattanooga.

ENGINEERS.

Landscape Engineer, NATHAN G. BARRETT.
Resident Engineer, W. J. KELLY.
Sewerage and Electrical Engineers, NIER, HARTFORD & MITCHELL.

Hon. SAM'L H. BUCK, Gen. Superintendent.

OFFICES.

Richardson Building, Chattanooga.
Union Trust Building, 80 Broadway, New York.
Company's Building, Kimball, Tenn.

Kimball Offers

Solid, practical inducements to manufacturers. First-class enterprises under good management will be guaranteed, one-half the cash required. Local taxes will be remitted for a term of years. Lowest freights and cheapest raw materials will be secured.

Auxiliary Companies

will be organized by the parent corporation for developing the wealth of the Sequachee Valley and for supplying the city with heat, light, water, power and transportation.

A Mammoth Industrial Building

will be erected by the Kimball Town Company, which will have power, light and heat, that will be supplied to manufacturers on the most liberal terms.

Ample provision made for religious and educational institutions.

No Further Auction Sales

this year and no private sales of the corporation's lots except to those who will contract to build immediately on plans approved by the management.

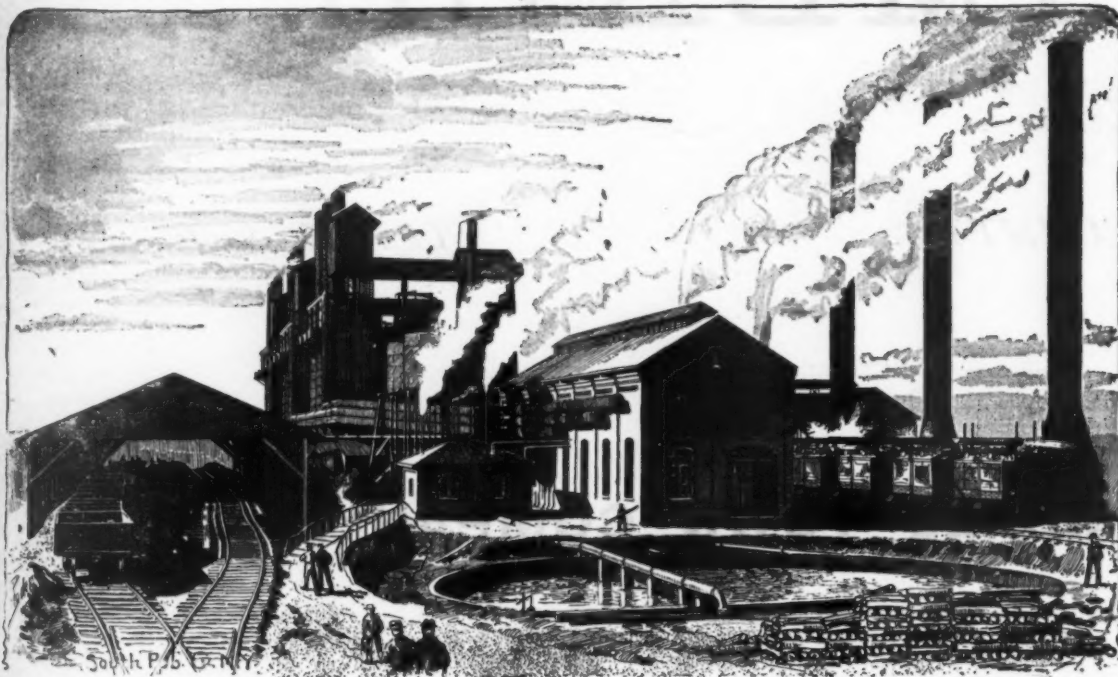
ALL CORRESPONDENCE SHOULD BE ADDRESSED TO

H. I. KIMBALL, Managing Director,

CHATTANOOGA, TENN.

SHEFFIELD, ALA.

THE SUPREME.



At the Headwaters of Deep Navigation on the Tennessee River, the Hudson of the South.

The Largest Producer of HIGH-GRADE Pig Iron of any City in the Entire Industrial South.

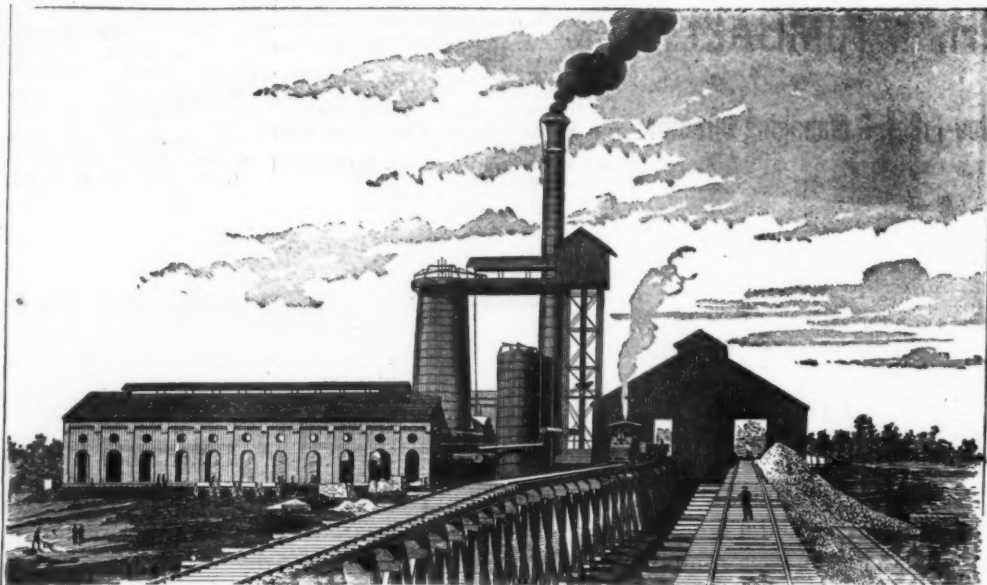
The only point in the South that has or can ship pig iron to the cities on the Mississippi, Missouri and Ohio rivers by boat or barge without rehandling. This last shipment of 5,000 tons of Pig Iron to Pittsburgh, Pa., by barge was made at a saving of \$2.65 per ton over what any iron-producing city of the South has done or can do to-day.

Five Large Blast Furnaces

Capacity 750 tons pig iron per day.

The following are among the corporate and private enterprises that belong to Sheffield:

The Sheffield Land, Iron & Coal Co., capital \$1,000,000.
 The Sheffield & Birmingham Coal, Iron & Railroad Co., capital \$1,000,000; the owners of three 150-ton blast furnaces.
 The Birm., Sheffield & Tenn. River Railway Co., capital \$5,000,000.
 The Hattie Ensley Furnace Co., capital \$200,000.
 The Lady Ensley Furnace Co., capital \$200,000.
 The Electric Light & Gas Fuel Works, \$50,000.
 The Sheffield Ice Co., capital \$25,000.
 The Sheffield Manufacturing & Constructing Co., \$30,000.
 The Sheffield Contracting Co., \$60,000.
 The Eureka Brick & Lumber Co., \$30,000.
 The Howard Brick Co.
 The Sheffield Bakery & Bottling Works.
 The Sheffield Mineral Paint Co., capital \$50,000.
 The Sheffield Agricultural Works, capital \$40,000.
 The Sheffield Cotton Compress Co., \$50,000.
 Millan Brothers, Steam Laundry.
 Enterprise Publishing Co.
 Water Works, already expended, \$30,000.
 Sheffield Street Railway Co., capital \$100,000.
 Cleveland Hotel Co., capital \$50,000.
 Sheffield Hotel Co., capital \$120,000.
 Bank of Commerce, capital \$150,000.
 East Sheffield Land Co., capital \$500,000.
 Hull & Keller's Fern Quarries.
 Mobile Real Estate Co., capital \$50,000.
 Sheffield Real Estate Co., capital \$50,000.
 Sheffield & Mobile Improvement Co., capital \$100,000.
 Sheffield Stove Works.
 Henderson Milling Co., capital \$100,000.
 Globe Iron & Brass Works, capital \$50,000.
 Standard Machine Shop & Foundry, capital \$50,000.
 Owen Pink Mixture Co., capital \$100,000.
 Bell Telephone & Telegraph Co.
 Foulds' Shoe Factory, capital \$20,000.
 Enterprise Wood Working Co., capital \$30,000.
 Buchanan Straw Goods Factory, \$25,000.
 The Sheffield Harness & Saddlery Co., capital \$20,000.
 Principal Shops of the Sheffield & Birmingham Railroad.
 Principal Shops Memphis & Charleston Railroad, now being built.



Aside from the foregoing the following are in course of construction and may be considered positive: Principal Shops of the Memphis & Charleston Railroad; Principal shops of the Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad. Reasonably certain to be secured in the near future are the following, in regard to which negotiations are pending: A Rolling Mill; Large Machine Shop; A Cotton Mill.

ALABAMA'S IRON CITY.

The Superb Location at the head of navigation on the Tennessee River, commanding the outlet to immense fields of IRON ORE and COAL and magnificent tracts of the finest Timber. Has already attracted to the spot where three years ago in a cotton field her projectors set the stakes of a new city, capital and people, unequaled in amount and number, circumstances considered, by any of the so-called new cities of the South.

With eight Church Organizations, two Free Public Schools, Postoffice, Telegraph and Express offices and abundant facilities of transportation by river and rail. It has every advantage as a residence city that can be desired.

Good Water; Drainage Excellent; Health and Climate Unsurpassed. Free Public Schools and Churches. Splendid opening for men of push and energy. No better point for profitable investment. No "Old Foggy" element here.

Sites for Manufacturing Enterprises

And for Free Public Schools and Churches

Donated by the Sheffield Land, Iron & Coal Company.

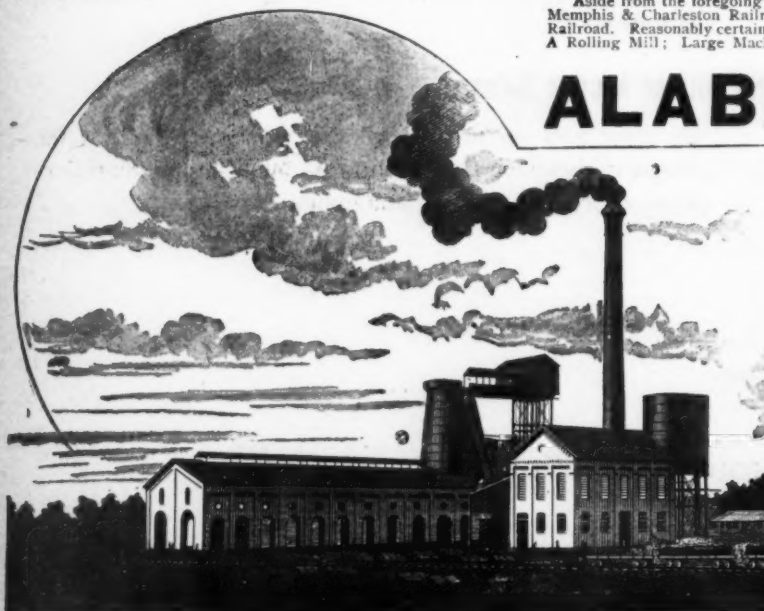
Printed information furnished on request. Correspondence solicited. Communications should be addressed

W. L. CHAMBERS,

Vice-President and Manager.

Sheffield Land, Iron & Coal Company,

SHEFFIELD, ALABAMA



The Staunton Development Co.

OF STAUNTON, VIRGINIA.

Authorized Capital \$2,000,000.

Shares \$100 par value each.

OFFICERS

M. ERSKINE MILLER, President, Staunton, Va.

S. M. YOST, Vice-President, Staunton, Va.

W. P. TAMS, Treasurer, Staunton, Va.

W. J. PERRY, Secretary, Staunton, Va.

DIRECTORS.

ISAAC WITZ, Staunton, Va.

S. M. YOST, Staunton, Va.

O. K. LAPHAM, Chicago, Ill.

GEORGE H. HULL, President American

B. F. EAKLE, Staunton, Va.

JED HOTCHKISS, Staunton, Va.

H. H. FAY, Capitalist, 28 State Street,

Pig Iron Storage Warrant Company, 44

JOHN McQUAIDE, Staunton, Va.

J. H. WAYT, Staunton, Va.

Boston, Mass.

Wall Street, New York.

ANDREW BOWLING, Staunton, Va.

M. ERSKINE MILLER, Staunton, Va.

W. L. FLEMING, Richmond, Va.

STAUNTON, VIRGINIA.

The Queen City of the Valley of Virginia.
Present Population 12,000.

Situated in Augusta county at the crossing of the Baltimore & Ohio and Chesapeake & Ohio railroads and accessible to the great coal and coke fields, namely: Connellsville, by the Baltimore & Ohio; Pocahontas or Flat Top by the Norfolk & Western and Chesapeake & Ohio, and New River Coke Fields by the Chesapeake & Ohio.

PROPERTY.

The lands acquired, aggregating 2,242 acres, more or less, are favorably situated within the city limits and adjoining the corporation lines, and it might be fairly said that about 240 acres are situated within the city of Staunton. The great bulk of the property lies between the Valley Railroad or Baltimore & Ohio Railroad and the Chesapeake & Ohio Railway, and is most admirably situated for railroad switches and side tracks to reach manufacturing enterprises. Several streams of good water run through the lands, affording abundant water supply for factories and fine drainage.

CAPITAL STOCK.

The authorized capital is two million dollars. One million, two hundred thousand dollars of stock will now be issued,

of which \$204,800 has been disposed of, leaving \$800,000 of stock in the treasury, to be hereafter issued, if it should be deemed wise to do so.

Subscribers will bear in mind that with every two shares of stock they will be entitled to either a business or residence lot, to be determined by a drawing at a date to be hereafter designated.

BOOKS OF SUBSCRIPTION NOW OPEN.

Staunton is within six hours' ride from Washington, seven of Baltimore, nine of Philadelphia and eleven of New York.

It has an excellent system of water works, paid fire department, electric light and gas companies, ice factory, street car line under construction, four newspapers, handsome opera house, commercial college and other important industries that contribute to the welfare of the city.

GLASGOW, —————→ ←————— VIRGINIA.

The Grandest Enterprise of the New South.

THE LOCATION

is naturally fine and adapted to the construction of a large city.

THE CLIMATE

guarantees immunity against epidemics.

WATER-POWER

is practically unlimited.

IRON ORE

in abundance and of fine quality.

LIMESTONE

near at hand and plentiful.

CEMENT

extensive deposits of good quality.

GLASS SANDS

in large quantities and of high grade.

TIMBER

of various kinds and abundant.

FUEL SUPPLY

Pocahontas and New River Coke in convenient proximity.

TRANSPORTATION FACILITIES

Two trunk lines—Norfolk & Western, with its Shenandoah Valley Railroad connection, and the Chesapeake & Ohio—giving direct communication with fields of finest Coaking and Steam Coals in the country, with deep water transportation with Norfolk & Newport News, with the West via Cincinnati.

THE PITTSBURG & VIRGINIA R. R.

to be built in the near future will go through the Blue Ridge mountains at this point.

FACILITIES FOR MANUFACTURING

unexcelled by those offered by any locality in the South.

ADDRESS

ROCKBRIDGE COMPANY,

Ex-Gov. FITZHUGH LEE,

Hon. WM. A. ANDERSON,

M. M. MARTIN,

President

Vice-President.

General Manager.

DENISON, TEXAS.

The "QUEEN" City of the Southwest,

— AND —

* GATEWAY *

— TO THE —

GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, and a six-mile motor railway; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1889. 300,000 baskets of strawber-

ries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has one of the largest canning factories in the country.

A cotton mill company with a capital of \$500,000 is building a 25,000-spindle cotton mill.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory has been increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY,

DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President.

B. J. DERBY, General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

W. P. RICE, Kansas City, Mo.
J. M. FORD, Kansas City, Mo.
SAM STAR, Denison, Tex.

B. J. DERBY, Burlington, Vermont.
ARTHUR L. BERRY, Denison, Tex.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
B. C. MURRAY, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

CARDIFF.

The Cardiff Coal & Iron Company,

CARDIFF, TENNESSEE.

Capital, \$5,000,000.

Fifty Thousand Shares—Par \$100.

(CHARTERED BY THE STATE OF TENNESSEE.)

PRESIDENT.

B. B. SMALLEY, BURLINGTON, VT., President of the Ogdensburg & Lake Champlain Railroad Company.

VICE-PRESIDENTS.

W. P. RICE, FORT PAYNE, ALA.

HENRY C. YOUNG, CARDIFF, TENN., of Cordley & Co., Bankers, Boston, Mass.

GENERAL MANAGER, - - - **M. M. DUNCAN**.

DIRECTORS.

THE PRESIDENT & VICE-PRESIDENTS, Ex Officio.

JOSHUA L. CHAMBERLAIN, NEW YORK CITY, N. Y., Ex-Governor of Maine and President of Bowdoin College; Ex-President of the Association of the Army of the Potomac.

WILLIAM WARNER, KANSAS CITY, MO., of Warner, Dean & Hagerman, Counsellors-at-Law; Ex-Member of Congress from Missouri, and Commander-in-Chief of the Grand Army of the Republic.

SAMUEL E. PINGREE, HARTFORD, VT., Ex-Governor of Vermont; Chairman of the Board of Railroad Commissioners of Vermont.

CHARLES L. JAMES, BOSTON, MASS., of James & Abbot, Lumber.

T. G. MONTAGUE, CHATTANOOGA, TENN., President of the First National Bank of Chattanooga; Director of the Roane Iron Co.

ROBERT PRITCHARD, CHATTANOOGA, TENN., of Pritchard, Sizer & Thomas, Counsellors-at-Law.

J. F. TARWATER, ROCKWOOD, TENN., of Tarwater & Brown, Iron Miners.

J. M. FORD, KANSAS CITY, MO., President of the Fort Payne, Ala., Furnace Co., and of the First National Bank of Denison, Texas.

CARLOS HEARD, BIDDEFORD, ME., Merchant.

JOHN M. WHIPPLE, CLAREMONT, N. H.

FISCAL AGENTS IN THE NORTH.

CORDLEY & CO., BANKERS, 121 Devonshire Street, Boston, Mass.

BANKERS IN THE SOUTH.

FIRST NATIONAL BANK OF CHATTANOOGA, TENN.

TRANSFER AGENTS.

AMERICAN LOAN & TRUST COMPANY, BOSTON, MASS.

THE CARDIFF COAL & IRON COMPANY, at a public sale held April 22d to 24th sold over one million dollars' worth of business and residence property to investors, who will build on and improve the same at once. The prices were conservative and maintained within the limits of actual value. The proceeds of this sale, together with the sum to be contributed by the Cardiff Coal & Iron Company from the sale of its treasury stock, gives the management two million dollars, all of which will be expended in building up the town. The place does not exist that can approximate the inducements that this city now offers to every class of industry and manufacture.

SITUATED IN A HEALTHY CLIMATE,

SUPPLIED WITH PURE WATER,

EXCELLENT TRANSPORTATION FACILITIES,

In the Heart of the Great Iron and Coal Belt of Tennessee,

Surrounded by a rich agricultural community, with every class of business sustained by the demands of the country, Cardiff will furnish to the Manufacturer, the Merchant, the Banker, the Professional Man, the Farmer, the Miner, the Laborer all that reason demands.

Financial Encouragement will be Given Every Class of Business.

The Cardiff town site contains over 3,000 acres. The building of Cardiff is in charge of men of approved judgment and experience. The town will be developed by the erection of Iron Furnaces, Coke Ovens, Hotel, Water Works, Motor Line, Electric Lights, Manufacturing Plants, Public Buildings.

BUENA VISTA, VA.

The Growing Manufacturing City
of the Valley.

FREE SITES FOR INDUSTRIAL ENTERPRISES.

THREE GREAT RAILWAY SYSTEMS

The Baltimore & Ohio, Chesapeake & Ohio and Shenandoah Valley connect it with the principal markets of the country.

ITS ADVANTAGES ARE:

An unsurpassed climate; splendid water-power; a fine system of freestone water, which is conducted through the town in water mains, and its picturesque scenery.

UNLIMITED QUANTITIES OF SUPERIOR IRON ORES AT ITS DOORS.

With these advantages it commends itself at once to the consideration of those desiring to locate industrial enterprises where raw material is at hand and plants can be economically operated and a ready market in easy communication for its products.

ITS RECORD FOR ONE YEAR.

Four hundred resident and business houses; a fine system of water mains and sewers; electric light; two banks; two churches, two schools, one public, the other a female seminary, and a population of 2,050 souls.

INDUSTRIES SECURED.

Iron Furnace—almost completed.....	\$300,000
Pulp and Paper Mills—completed.....	85,000
Saddle and Harness Factory—in operation.....	10,000
Fire Brick Works—in course of construction.....	100,000
Steam Tannery—in operation.....	
Planing Mills and Lumber Yard—in operation.....	20,000
Furniture and Chair Factory—completed.....	20,000
Red Brick Works—in operation.....	30,000
Wise Wagon Works—in operation.....	25,000
Wire Fence Factory—in operation.....	10,000
Woolen Mille—in course of construction.....	70,000
Electric Light Plant—in operation.....	10,000
First National Bank of Buena Vista—in operation.....	50,000
Buena Vista Building & Investment Company, Bankers—in operation.....	81,800
Buena Vista Building & Improvement Company—in operation.....	80,000
Buena Vista Advocate and Job Printing Office—in operation.....	5,000
Egg Crate Factory—organized.....	50,000
Lexington Investment Company—in operation.....	50,000
Virginia Real Estate Investment Company—in operation.....	100,000
Basic Steel Works—organized and ready for construction.....	300,000
Three Livery Stables—all in operation.....	10,000
Engine and Boiler Plant—organized.....	300,000
Power Distributing Plant—being organized.....	40,000


\$1,736,800



Buy the Best Stock on Sale in Virginia.

The Grottoes Company

owns **25,000** acres of the best **Iron** and **Timber** lands, and **5,000** acres of unsurpassed **City Site** lands, or 30,000 acres all in one body, including the famous Weyer and Fountain Caves, the noted Grottoes Hotel, a large Electric Light Plant, two good Water Powers, twenty-five Brick and Frame Houses, a thousand acres of native forests in parks, etc., etc. It now offers **15,000 Shares** of its stock (par value \$100 at \$50 per share: The buyer of 5 shares of stock will be allotted a good city lot, not less than 25x120 feet in size, without charge; and the buyer of 25 shares of stock will be allotted 5 city lots and one villa lot without charge.

 Go and see the property, where the **City of Shendun** is now being laid out, at The Grottoes, Shenandoah Valley Railroad, Augusta and Rockingham counties, Va., and you will agree that *nothing yet offered compares with it in intrinsic value.*

For prospectus, maps and information, address The Grottoes Company, Staunton, Va., or The Grottoes, Va.

Jed. Hotchkiss, President,
Staunton, Va.

MIDDLESBOROUGH,

KENTUCKY.

There Are Now Under Contract:

A Basic Steel and Iron Plant, daily capacity 300 tons, to cost \$1,000,000 and to employ about 1,000 hands.
 An Iron Rod Mill; A Sheet Mill; A Nail Mill.
 Two Coke Iron Furnaces, 150 tons daily capacity each, and one Charcoal Furnace.
 A \$500,000 Tannery—the largest in the world
 Fourteen Coal Mining Enterprises, to employ about \$2,000,000 capital.
 A Dozen Wood-Working Enterprises.
 A Twelve-Mile Belt Railroad.
 Tile Works, Fire and Building Brick Works, and a dozen or more other enterprises.

\$18,500,000

Already Invested in the Development of Middlesborough.

Since the above announcement was made, Mr. A. A. Arthur, the manager of the company, has returned from London, where he secured an additional **\$8,000,000** to be invested in Middlesborough enterprises.

The capital of the Water Works Company has been increased from \$200,000 to \$750,000.

The capital of the Electric Street Railway Company has been enlarged to \$250,000 and the proposed lines extended so as to cover all the principal streets.

The length of the Belt Railroad has been increased to 20 miles, and the whole line will be in operation in a few weeks.

The money has also been secured for an extension of the Knoxville, Cumberland Gap & Louisville Railroad through the tunnel into Middlesborough. There is now under negotiation a lease of railway systems, of which the Knoxville, Cumberland Gap & Louisville road will form a link, giving Middlesborough trunk line connection with Chicago, Cincinnati, Louisville, Atlanta, Charleston, Savannah and Pensacola. Arrangements are also being made for direct connection between Cumberland Gap and some point on the Atlantic coast, and following this will be the establishment of a line of steamers between that point and Liverpool.

\$400,000 has been secured for the Middlesborough Coal and Iron Bank, which is now a regular department of the American Association's business.

The entire capital of the Cumberland Gap Park Company, \$1,800,000, has been secured in London. Contracts

have been let for the magnificent hotel, casino, sanitarium and other buildings.

The Middlesborough Hotel Company's capital has been increased. The company is now making an addition to its present building at a cost of \$25,000. Contract has been let for new hotel with ball room, casino and all the attractions and appointments of a first-class house, to cost \$75,000.

Contract has just been made for a new office building for the American Association, to be of stone and to cost \$35,000. A new office building will also be put up for the Middlesborough Town Company, the material to be stone and brick.

The Ousiotto Building Company, with a capital of \$250,000; the Manchester Building Company \$200,000; the St. Helen's Building Company \$200,000, and the New South Building and Loan Company with \$100,000, have been organized.

The eminent engineer, Mr. George E. Waring, Jr., of Newport, R. I., has been given the superintendency of contracts for a system of sewerage for Middlesborough and for the continuation of the work of straightening the stream that flows through Middlesborough. These improvements will cost \$150,000.

Mr. Arthur completed plans for a residence town at Cumberland Gap in connection with the American Association's developments. The amount secured for this purpose was \$750,000. The laying out of these lands has been given to Mr. George E. Waring, Jr.

The Watts London Iron and Steel Syndicate will increase its capital to £1,500,000 (\$7,500,000) and build other industries in addition to those already announced. Of the two furnaces now building the first will blow in early next October, and the second in November. Two other furnaces will be let to contract January 1.

Parties from Manchester, London and Liverpool will attend the May auction sales at Middlesborough, and will come with \$500,000 to invest in Middlesborough lots. Other parties are coming to form subsidiary companies to operate at Middlesborough in addition to those enumerated above.

The Northern American Association has been formed with a capital of \$3,750,000 to develop 200,000 acres of Kentucky coal lands; also the Anglo-American Association, with capital of \$2,000,000, to develop 80,000 acres of Kentucky coal lands, and the Western American Association, with capital of \$3,000,000, to develop 150,000 acres of coal and iron lands in Tennessee.

Counting the new enterprises arranged for on this trip and the additions to the capital of such as had been already announced, Mr. Arthur has secured nearly \$8,000,000 to be invested at Cumberland Gap. This is **\$8,000,000 of new money to be added to the millions already invested.**

Thus the Amount of Capital now Invested in the Development of Middlesborough reaches

\$26,500,000.

Besides this, the three coal and iron companies mentioned above, whose aggregate capital is **\$8,750,000**, are closely allied to the American Association and the Middlesborough Town Company, and their developments will be made to contribute to the growth of Middlesborough.

The history of the world does not show an instance of

such amazing development in so short a time, and on so sure and solid and permanent a foundation.

A year ago the population of the present site of Middlesborough did not exceed 50; to-day the town has a population exceeding 5,000. It is a conservative estimate to say that in three years 50,000 people will be living here.

MIDDLESBOROUGH TOWN CO., Middlesborough, Kv.

DENISON,

TEXAS.

THE
Future Manufacturing and Commercial Center
OF THE
GREAT SOUTHWEST.

DENISON SUPPLIES THE COAL FOR TEXAS.

She has at her gates the only **COKING COAL** of any value in the Mississippi Valley. To the Southwest lies the best **MAGNETIC IRON ORE** in the world, while to the north and Southeast are fields of **BROWN HEMATITE ORE** of the finest grade. These ores must meet the **COKE** and **COAL** at **DENISON** and there to be worked.

DENISON cannot be surpassed for **HEALTHFULNESS** and **BEAUTY** of location. Six divisions of railways terminate at Denison and are operated by her citizens.

DENISON has an abundant supply of pure, soft water and plenty of good, cheap **BUILDING MATERIAL**.

The attention of investors and those seeking advantageous locations for business or for manufacturing plants is invited to the opportunities presented at Denison.

MUNSON & BRO. HAVE SUPERIOR FACILITIES FOR THE SAFE AND PROFITABLE INVESTMENT AND HANDLING OF CAPITAL.

For information about **DENISON** and for bargains in **BUSINESS** and **RESIDENCE PROPERTY**, **ACRE PROPERTY** and **FARMS NEAR THE CITY**, write or call upon

MUNSON & BRO.

301 WOODWARD STREET,

DENISON, TEXAS.

Six Trunk Line Railroads at BESSEMER

✻ In the heart of Mineral Alabama, encircled with hills of Coal, Iron, and Limestone Rock. ✻

"The South is the coming El Dorado of American adventure. May the Almighty speed and guide her onward progress!" So wrote the Hon. W. D. Kelley, M. C., of Pennsylvania, a few months ago and every day brings forth new evidence to prove the correctness of his prediction and to show that without a doubt the South is to be the richest country upon the globe. In climate, soil, mineral and timber wealth, in rivers large and small, in a long seacoast, in abundant rainfall, in healthfulness and in every other advantage that could be asked nature seems to have done her best for this favored land. The wealth in iron and coal is beyond estimate. Of timber there is an unlimited supply, including nearly every variety of hardwoods for woodworking purposes.

Seven Furnaces, output 1890, 250,000 tons; Rolling Mill, 100 tons daily; Fire Brick Works, 25,000 daily; Many Lesser Industries

Offers Thirty Varieties of Hardwoods for Woodworking Industries.

11,000 City Lots For Sale.

The Bessemer Land & Improvement Co.

this new year, are prepared to deal liberally for the founding of Iron and Woodworking industries in this growing Mining and Manufacturing Center.

H. F. DeBARDELEBEN, Prest.

H. M. McNUTT, Secretary.

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MONEY
WILL
GROW!

THE PLACE FOR FACTORIES.

THE ROANE IRON CO.

WILL BUILD UP A

✻ LARGE MANUFACTURING CITY ✻

AT

ROCKWOOD, TENN.

AND IS PREPARED TO OFFER SUBSTANTIAL INDUCEMENTS TO MANUFACTURERS.

○—AS TO RESPONSIBILITY OF THIS COMPANY, PARTIES ARE REFERRED TO EITHER DUNN OR BRADSTREET.—○

FOR PARTICULARS ADDRESS

ROANE IRON CO., Rockwood, Tenn

The Shenandoah Land & Improvement Co.

RESPECTFULLY

— Calls the Attention of Manufacturers and Investors —

To the SUPERIOR LOCATION and FACILITIES

FOR MANUFACTURING PURPOSES, HOMES AND INVESTMENTS GENERALLY

NOW OFFERED AT

SHENANDOAH,

PAGE COUNTY, VIRGINIA.



SHENANDOAH'S NEW HOTEL.

LOCATION.

The town is situated on the east bank of the Shenandoah river, in the world renowned Shenandoah valley, the climate and scenery being unexcelled in the most favored sections of the United States. 1,100 feet above sea level; malaria unknown; atmosphere clear and bracing.

MINERALS AND TIMBER.

On both sides of the Shenandoah river, and immediately adjacent to Shenandoah, are immense tracts of land rich in iron, manganese, copper, lead, asbestos, slates, ochres, fire-clay, etc., of fine quality.

Vast bodies of timber lands, furnishing in endless quantity the finest oak, hickory, ash, maple, walnut, chestnut, elm and pine for manufacturing and decorative purposes.

RAILROADS.

The Shenandoah Valley Railroad runs directly through Shenandoah, which will be the terminus of the Washington extension. The West Virginia Central Railroad, as projected, will pass through Shenandoah, opening up the immense mineral deposits of the Massanutten Mountains.

PRESENT INDUSTRIES IN OPERATION.

There is a Furnace Company, producing 30,000 tons of foundry and mill iron annually. They also operate a foundry. The Shenandoah Valley Railroad have here their principal machine shops, car shops, blacksmith and boiler shops. There is a brick works and two planing mills.

Improvements Decided Upon and Under Construction.

The Land and Improvement Company are building a large and commodious hotel; also a handsome office building. Plans are fully decided upon and work will soon begin on a water works, electric-light plant, water-power facilities, about one hundred dwellings, besides grading streets and laying sidewalks.

The Furnace Company have completed plans and will at once erect another Furnace and a rolling mill.

The Railroad Company will erect a handsome rough stone passenger station, a large freight house, new shops and a round house—doubling present capacity.

Many individuals are building residences and stores.

INDUCEMENTS TO MANUFACTURERS.

The Shenandoah Land & Improvement Company are prepared to offer inducements to manufacturers to locate here, and will treat most liberally with any such who desire to establish industrial plants.

By special permission in the charter of Shenandoah, all manufacturers who may establish works here are exempted from corporation taxes for five years.

Possessing so many advantages of such varied character, together with the many improvements now fully decided to be established here, there is every reason to believe that, based on a conservative estimate, Shenandoah will have at least 10,000 inhabitants within the next three years.

FOR COPIES OF PROSPECTUS OR FURTHER INFORMATION, ADDRESS

J. F. WHEELWRIGHT, Secretary.

C. POWELL NOLAND, President.

PRINCIPAL OFFICE, SHENANDOAH, PAGE COUNTY, VIRGINIA.

* LURAY, * Virginia. *

2,500 Acres Town Lands,

8,000 Acres Mineral Lands,

Luray Inn and Caverns.

The Valley Land & Improvement Company,

Capital Stock, \$2,000,000.

Luray, Page County, Va.

DIRECTORS.

D. F. KAGEY, Luray, Va., President.	G. C. MARSHALL, Unlontown, Pa., Vice-President and General Manager.
T. E. McCORKLE, Lexington, Va.	DR. W. L. HUDSON, Luray, Va.
DR. A. M. HENKEL, Staunton, Va.	J. W. MILLER, Mount Jackson, Va.

EXECUTIVE COMMITTEE.

D. F. KAGEY,	G. C. MARSHALL,	T. E. McCORKLE,	G. K. MULLIN.
Secretary, T. E. McCORKLE.	Treasurer, H. M. KERR, Kagey & Co.'s Bank.	Attorney, T. E. McCORKLE.	
Associate Counsel, H. J. SMOOT,	Manager of Inn and Caverns, G. K. MULLIN.		
Bankers, D. F. KAGEY & CO., Luray, Va.			

CHARTER, PROPERTIES, &c.

The Valley Land & Improvement Company has been organized under the most liberal charter ever granted by the State of Virginia.

2,500 acres for manufacturing purposes and building sites. These lands are in and around the hotel, caverns and town of Luray on an undulating plateau, protected on either side by the Massanutten Mountain and the Blue Ridge Mountains.

8,000 acres of the best mineral properties in Virginia, consisting of iron, manganese and other valuable minerals which have stood the test of examination by the ablest geologists of the country.

The company owns the celebrated Luray Inn and the Luray Caverns.

Page County stands at the head of the list as having a greater variety of minerals and richer than any other county so far as known in the State.

In addition we have the finest kind and a great variety of virgin timber and fire-clays, slates, beautiful marbles, ochres, umber and mineral paints.

LOCATION, RAILROADS, &c.

Luray, now a town of about 2,500, is the county seat of Page county, has five churches, splendid schools, fine stores, three newspapers, flouring mill, cigar factory, &c.

The town is on the Shenandoah Valley Railroad, of the Norfolk & Western system, and is the best location in Virginia, four hours from tidewater.

Two new lines projected connecting closely with Baltimore and Washington and insuring cheap freights.

Luray has largest tannery in the world, annual pay roll over \$350,000.

Inexhaustible water supply, agricultural resources, charming climate.

Fine natural sites for furnaces and manufactories of all kinds fronting the railroad, reserved by the company, which by donations of land and in every possible way will promote Luray's manufacturing interests.

LOTS, CAPITAL STOCK, &c.

Capital stock \$2,000,000, shares \$100.

One million of stock reserved in treasury for betterment.

One million now offered for sale.

Books open at the bank of D. F. Kagey & Co., Luray, Va.

The company reserves the right to close the books any time before the full amount of the one million is sold.

Twenty per cent. must be paid on subscription, 20 per cent in 30 days, the balance equally in six and twelve months.

When half of the subscription is paid in subscribers have the right to use their stock in payment on lot purchases.

The company feels safe in saying that with the magnificent property in hand, the Inn and Caverns, it will be enabled when thoroughly under way to pay four or five per cent. dividend on the stock sold, independent of lots and mineral lands.

The company already owns an electric plant which will be considerably enlarged.

Complete system of water works and many other improvements projected. Investors are referred to Mr. J. W. Wheeler, Cashier Drivers and Mechanics' National Bank, Baltimore, Md., for full information. H. C. Turnbull, Jr., real estate agent, 52 Lexington street, will receive subscriptions of stock in Baltimore.

The fullest investigation invited.

THE VALLEY LAND & IMPROVEMENT COMPANY, LURAY, PAGE COUNTY, VA.

FOR SUCH INDUSTRIES AS

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DALLAS MANUFACTURERS' AID & IMPROVEMENT CO.

711 Main Street, Dallas, Texas.

BEDFORD CITY LAND & IMPROVEMENT CO.**BEDFORD CITY, ^{LAT} LIBERTY, VA.**

By special act of the Legislature of Virginia the Bedford City Land & Improvement Company was chartered with the most liberal grants of power. The company has been fully organized.

AUTHORIZED CAPITAL - - - \$1,000,000.

JAS. M. BERRY, (of Berry Bros., Tobacconists,) **President.**

R. B. CLAYTOR, (of R. B. Claytor & Co., Merchants) **Vice-President.**

J. LAWRENCE CAMPBELL, (of Burks & Campbell, Attorneys-at-Law,) **Secretary.**

S. M. BOLLING, (of Bolling, Wright & Co., Tobacconists,) **Treasurer.**

BOARD OF DIRECTORS:

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R. B. CLAYTOR,

J. M. BERRY,

C. W. WHARTON,

J. LAWRENCE CAMPBELL,

T. D. BERRY,

S. M. BOLLING,

SAMUEL GRIFFIN,

W. W. BERRY,

DR. W. W. SMITH, President of Randolph-Macon College,

REV. A. E. DICKINSON, D. D., Editor of the Religious Herald, Richmond, Va.

The Company is solvent and its business is conducted on the soundest business principles. It is not engaged in wild booming.

Only \$300,000 worth of stock has been offered to the public.

The Company owns nearly 800 acres, containing the best residence, business and manufacturing sites. The stock which is offered is in ten-dollar shares, payable \$2 per share cash when subscribed, \$1 each thirty days thereafter, until \$5 is paid on the share. For this the Company issues paid up non-assessable certificates of stock. The money thus raised is to be applied to the improvement of the property.

Bedford City is not an old field, but a thrifty, growing community, in the most healthful and beautiful mountain region in Virginia.

Mean yearly temperature 53.7; Winter, 44; Summer, 78.

A few miles from the peaks of Otter, it would be difficult to exaggerate the exquisite beauty of the scenery and the tonic quality of the atmosphere. Within a days ride of Boston, New York, Philadelphia, and a few hours from Baltimore, it presents unusual advantages for health seekers.

The present population is nearly 4,000. There are 30 manufacturing enterprises, large and small, in operation, and 10 new secured with capital provided, which go into work as soon as buildings can be put up and the plants erected.

On the Company's lands are the elegant Randolph-Macon Academy, the largest school for boys in the South, and the Jeter Memorial Institute for young ladies, which will be commenced within six months. The Norfolk & Western R. R. Co. will build a fine passenger depot near a first-class hotel, to cost \$75,000. Poindexter, the architect of the Academy, is now preparing plans.

The Bedford City Company offers the most beautiful residence sites in the western part of the town, in which direction it is rapidly building.

This is the safest and best investment offered anywhere in Virginia. It is a golden opportunity to get property in a splendid section, as rich in minerals as it is healthful and magnificent in the grandeur of its mountains.

A new railroad from Glasgow to Atlanta will be built. Its construction will begin this year. For further particulars address

J. M. BERRY, President of Bedford City Land & Improvement Co., Bedford City, Va.

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TRADE MARK. A complete outfit. Easy to put up, always reliable and fully warranted to meet the wants of any farmer.

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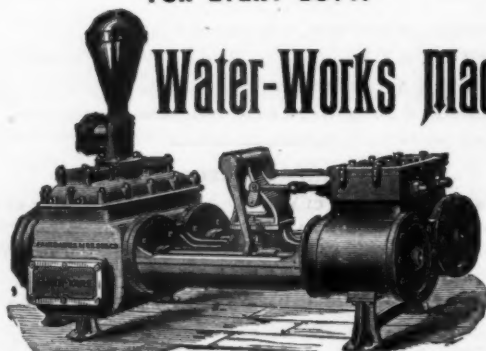
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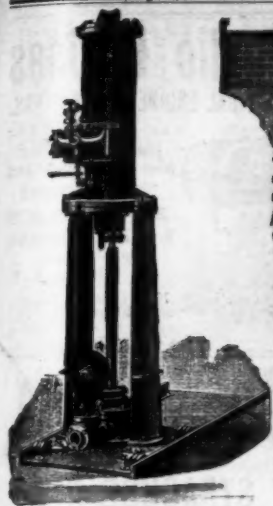
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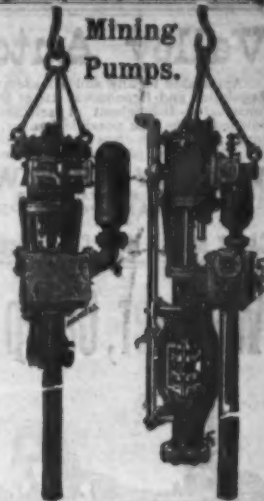
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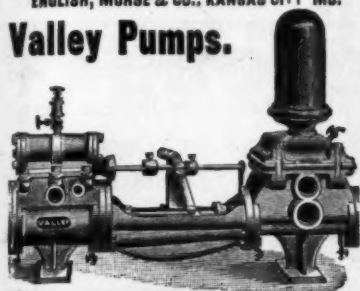
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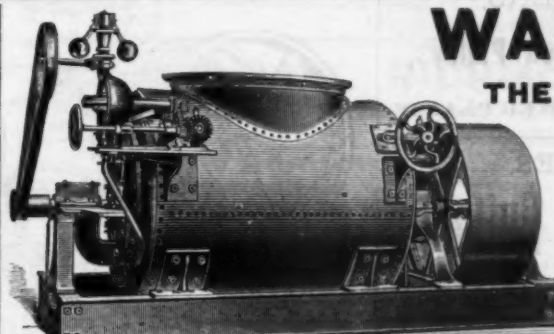
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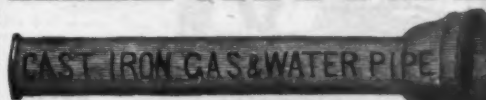
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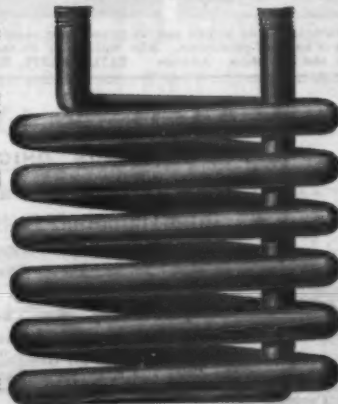
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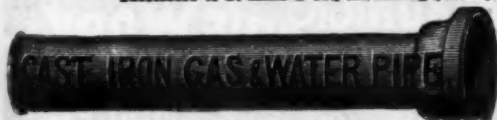
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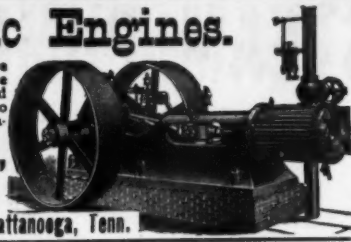
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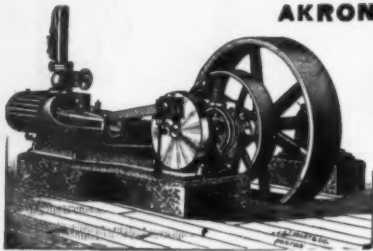
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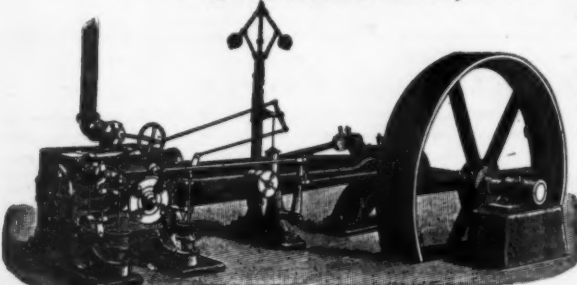
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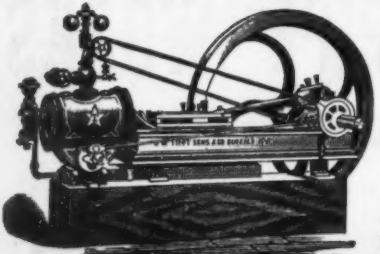
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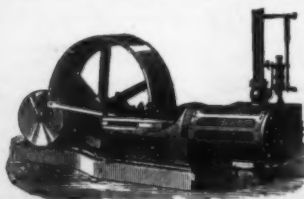


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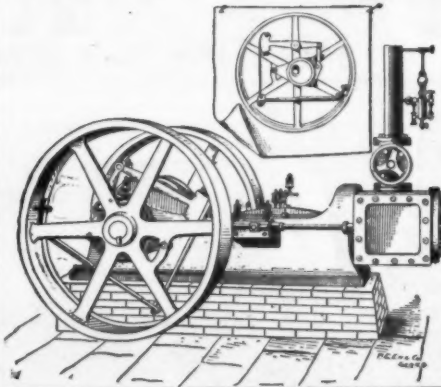
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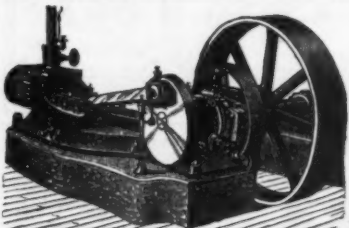
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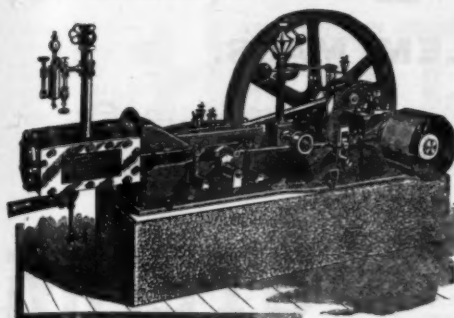
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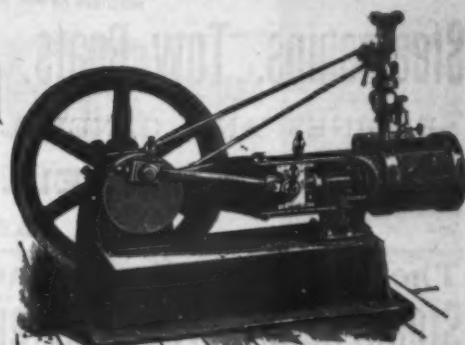
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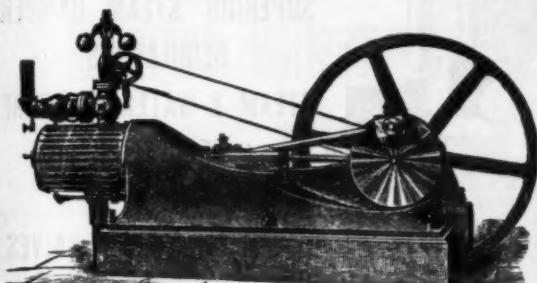
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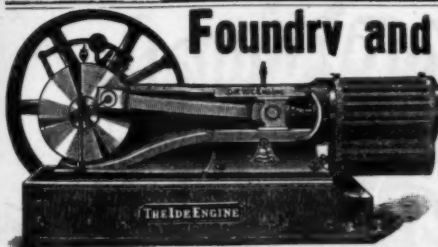
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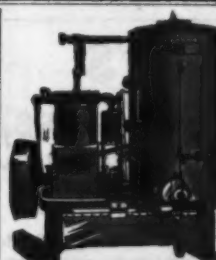
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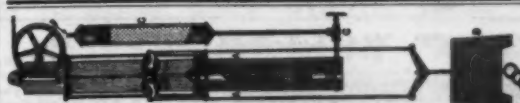
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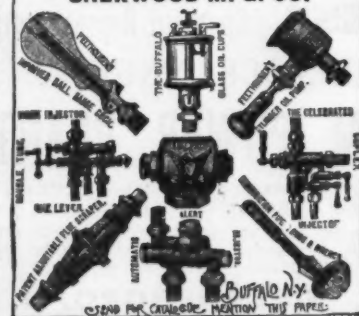
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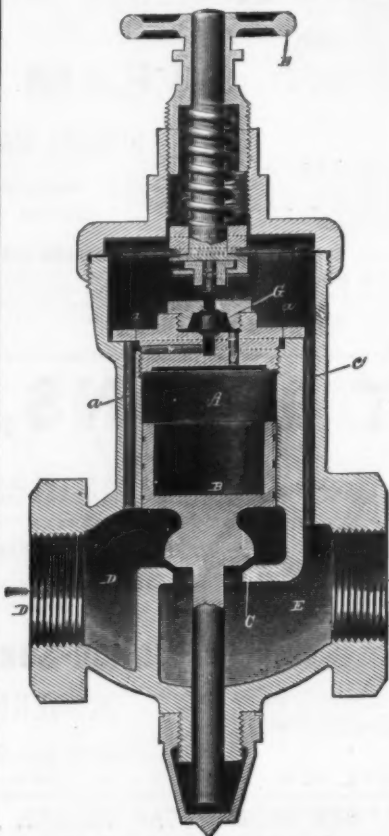
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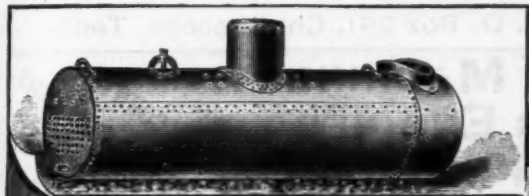
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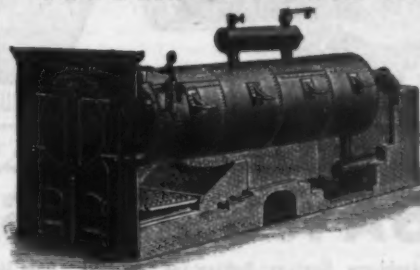
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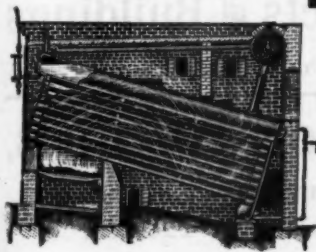
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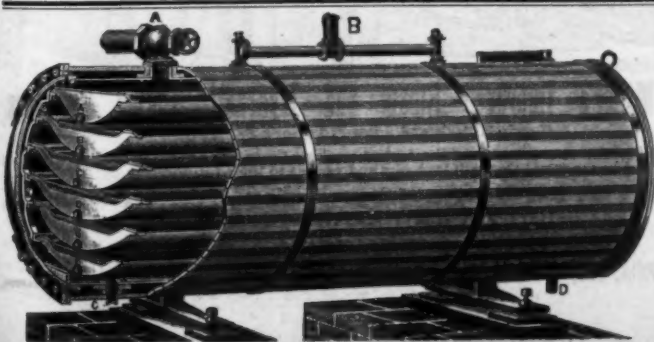
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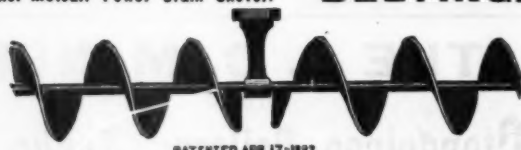
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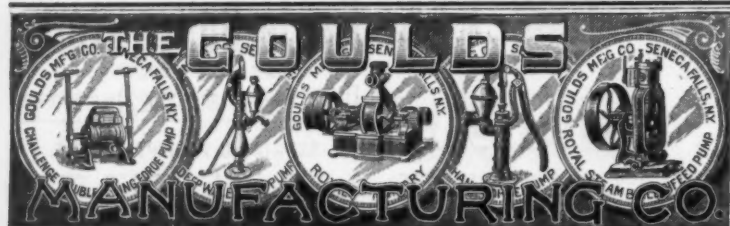
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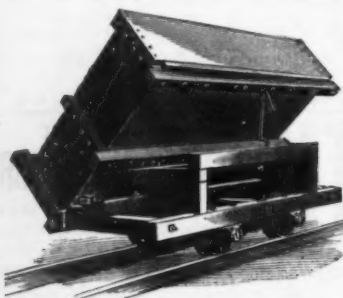
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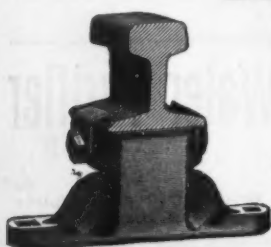
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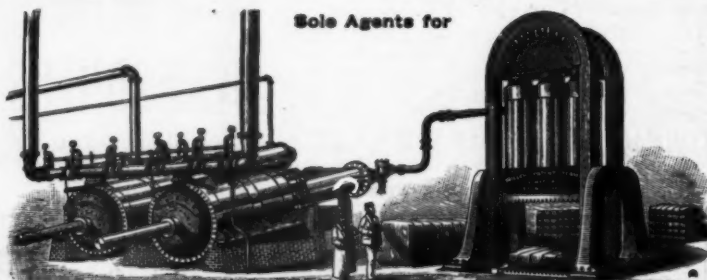
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A LEASE has been recorded from the Finance Co., of Philadelphia, Pa., trustee, to the Baltimore & Ohio Railroad Co., of \$2,000,000 worth of rolling stock, in accordance with the resolution of the Baltimore & Ohio directors at the meeting on the 21st of last July. The Baltimore & Ohio Railroad, by the terms of the lease, obtains control of 35 locomotives, 17 passenger cars and 2,700 freight cars. The \$2,000,000 of bonds issued are the balance of the \$3,000,000 equipment bonds authorized on the 20th of February, 1889. The company is to pay 5 per cent. interest on the loan and also \$200,000 yearly on the principal, extinguishing the debt in ten years. This equipment loan was taken by the Finance Co. of Pennsylvania and marketed from their office in Philadelphia.

THE Baltimore & Ohio holds a meeting at Baltimore on September 1 to consider, among other matters, that of authorizing a traffic agreement with the Baltimore Belt Railroad Co. and the indorsement upon the latter company's bonds by the former company.

THE Atlanta & West Point Railroad Co. has held its annual meeting at Atlanta. The following officers were elected for the ensuing year: C. H. Phinizy, president; H. M. Abbott, secretary and treasurer. The directors are D. N. Speer, Pat Calhoun, J. W. Green, W. B. Berry, A. E. Thornton, Jacob Phinizy. Genl. E. P. Alexander, of the Georgia Central, is no longer a director, his place being taken by Mr. A. E. Thornton.

THE annual meeting of the stockholders of the Cheraw & Chester Railroad Co. has been held in Chester, S. C. W. H. Hardin was re-elected president and D. Hemphill, secretary and treasurer. The following constitute the new board of directors: J. L. Glenn, O. Barber, J. W. McDaniel, J. W. Wilks, W. H. Hardin, B. J. Witherspoon, J. W. Twitty, J. N. Crockett, J. N. Williams and J. H. Harper. A resolution was introduced looking to the extension of the road from Lancaster to Lynch's River.

THE Central Railroad & Banking Co. of Georgia may surrender its charter at the next session of the legislature. At least a report is current to that effect. Of course, it will want a new one in that event. Perhaps a modification of the present charter can be made which will be satisfactory. If the old one is given up the Central will be subject to taxation, from which it is now exempt. The objection to the old charter is that it restricts the company in making financial arrangements. For instance, the report goes, that a large loan was on the point of being negotiated with an English syndicate when a question arose over the authority of the Central to issue the bonds in question. The matter was thoroughly examined by lawyers, and the syndicate was advised not to conclude the negotiation at present. General Alexander, when asked about the report, said that the subject of having the Central's charter modified has long been discussed; as yet, though, no decision has been arrived at. "Nothing would be asked of the General Assembly," said the president, "that is not given to other roads." The president went on to explain that railroads need large sums of money constantly to make improvements required of increasing traffic. To illustrate, he mentioned that President Roberts, of the Pennsylvania Railroad, states in his last report that his company needs \$6,000,000 a year for improvements. The Central has great improvements in view at different points. These cannot be made out of the net earnings. But the road's earning ca-

capacity would be so increased that the company could well afford to pay interest on the cost of improvements. A financial plan, long considered, is said to contemplate the issue of a blanket mortgage bond on the entire system. Such a bond issued under a charter allowing it would be taken abroad and would bring millions of dollars to Georgia.

A DISPATCH from Memphis, Tenn., concerning the projected mammoth electrical railway system, says: "C. B. Holmes, of Chicago, to-day made the final payment of \$537,000 necessary to close the deal and assume control of all the street-car lines of Memphis." The entire street railway system of Memphis comprises some 65 miles of road. This deal has been under negotiation for a long while.

FOR some time a rumor has been talked about that the Chesapeake & Ohio Railway Co. intended to parallel the Norfolk & Western from its Richmond & Alleghany Branch at Lynchburg to Norfolk. So strong was the evidence that this was authentic that President Ingalls was queried as to its correctness. He denies the statement in these words: "There is not a word of truth in the rumor. We already have our own line to Norfolk, and it is as good as we want."

MR. ROBERT W. WORTHEN, who is superintending the construction of the Mississippi & Little Rock Railroad, in a telegram from Roe, Ark., to Mr. George R. Brown, secretary of the company, at Little Rock says: "Commenced laying steel yesterday, the 11th, at 11 A. M., and expect to push the work as rapidly as possible."

\$1,500,000 for Glasgow, Va.

[Special to MANUFACTURERS' RECORD.]

GLASGOW, VA., August 20, 1890.

News has been received here from Hon. Wm. A. Anderson, who is in London as the representative of the Rockbridge Co., that \$1,500,000 has been secured for industries at Glasgow.

The officers of the company confirm the report. Major M. M. Martin, when asked about the matter said:

"Our counsel, who is in London, assures us that the agreement for \$1,500,000 is made, and that as soon as the details of the contracts are completed the money will be paid over."

With the closing of the deal with the English syndicate, Glasgow's future as an industrial center is assured.

LAST spring the Fort Worth Moss Collar, Bagging & Cordage Co. obtained a quantity of okra seed from Dr. M. Chambers, of New Orleans, La., a fibre expert of considerable note, and planted 100 acres about 8 miles north of Fort Worth. Dr. Chambers now proposes to remove his decorticating machine to Fort Worth, and exhibit what can be done with the native okra, which he states proves especially adapted for manufacturing purposes.

WHILE boring for a solid rock foundation in the Oconee river for the drawbridge of the Savannah, Americus & Montgomery Railroad, an artesian well was struck in the middle of the river. Iron piping was being used and struck the well at a depth of 52 feet after passing through several feet of mud and a strata of quicksand. The water spouted from the end of the pipe high in the air, and is said to be clear and cold. There is some talk of the railroad company sinking a larger pipe and utilizing the supply which is believed to be abundant.

Railroad Construction

Anniston, Ala.—Railroad.—The Alabama Mineral Railroad Co., lately reported as a consolidation of the Anniston & Atlantic and Anniston & Cincinnati Railway Cos., will hold a stockholders' meeting on September 1 for the purpose of authorizing the extension of the main line from Sylacauga to Calera, as previously stated.

Baltimore, Md.—Belt Railroad.—Bids have been closed for the construction of the Baltimore Belt Railroad, previously reported.

Baltimore, Md.—The Western Maryland Tidewater Railroad Co. will hold a stockholders' meeting on August 27 to decide as to the issuance of bonds, etc., and the leasing of its property to the Western Maryland Railroad Co.

Bartow, Fla.—Street Railroad.—It is said that a company has made a proposition to construct a street railroad, provided sufficient donations are made.

Bedford City, Va.—Railroad.—Surveys have, it is stated, been commenced on the Bedford City & Big Island Railroad.

Big Clifty, Ky.—Railroad.—It is reported that a branch of the Newport News & Mississippi Valley Railroad (office, New York, N. Y.) will be constructed to the asphalt deposits of Grayson county.

Brunswick, Ga.—Railroad.—The Cumberland Island Co., mentioned elsewhere in this issue, will, it is reported, construct a railroad on Cumberland island.

Camilla, Ga.—Railroad.—The construction of a railroad to extend to Cheevertown is being agitated by the citizens of Camilla.

Charlottesville, Va.—Railroad.—A railroad is projected from Charlottesville to Scottsville.

Chester, S. C.—The Lockhart Shoals Construction Co. has been incorporated with a capital stock of \$15,000 by Wade Osborne, R. O. Thomson and Joseph M. Sims. The company is organized to construct railroads, build canals, erect mills, etc.

Clinton, S. C.—Railroad.—James G. Gibbs has completed the survey, it is stated, of the Columbia, Newberry & Laurens Railroad (office, Columbia) as far as Clinton.

Cookeville, Tenn.—Railroad.—It is reported that the Nashville, Chattanooga & St. Louis Railroad Co. (office, Nashville) will extend its road to Middleborough, Ky.

Dunlap, Tenn.—Railroad.—Rockwell, Poe & Crutchfield have, it is stated, secured contract for constructing the extension of the Nashville, Chattanooga & St. Louis Railroad (office, Nashville, Tenn.), lately mentioned.

Elizabethton, Tenn.—Railroad.—Durand & Co. have, it is stated, secured contract for constructing 40 miles of the Bristol, Elizabethton & North Carolina Railroad, previously referred to, extending to Mountain City.

Erwin, Tenn.—Railroad.—It is reported that a charter has been obtained for a railroad to extend to Morristown via Embreeville, and to be known as the Unaka & Nolachucky Railroad.

Florence, Ala.—Belt Railroad.—The Louisville & Nashville Railroad Co. (office, Louisville, Ky.) is, it is stated, making surveys for a belt railroad two miles in length.

Fort Payne, Ala.—Electrical Railroad.—Books of subscription have been opened for the construction of a street railroad. True P. Pierce can give information.

Fort Worth, Texas.—Railroad.—The Panhandle, Corsicana & New Orleans Railway Co. has been chartered with a capital stock of \$1,000,000 for the purpose of constructing a railroad to extend to Alexandria, La., a distance of 300 miles. R. S. Neblett, S. W. Johnson, H. G. Damon, James Garrity and Stephen Smith, of Corsicana; J. W. Morgan and S. R. McLean, of New York; James Lloyd, of Pennsylvania, and John Watkins, of Manchester, Eng., are the incorporators.

Frankfort, Ky.—Electrical Railroad.—Fayette Hewitt, P. McDonald, J. W. Pruett and others are the incorporators of the Capital Railway Co., organized to construct an electrical railroad.

Gadsden, Ala.—Railroad.—Track-laying has been commenced on the Gadsden & Attalla Union Railroad, previously reported. F. C. Dunn has the contract, it is reported.

Grenada, Miss.—Railroad.—A committee is said to have been appointed to secure right of way for a railroad to extend to Parsons, a distance of 12 miles.

Grovetown, Ga.—Railroad.—F. T. Lockhart, J. L. Fleming and J. T. Newberry have applied for charter of incorporation for the East Georgia Railroad Co. to construct a railroad to Appling, a distance of 10 miles; capital stock \$300,000.

Jackson, Miss.—Railroad.—The city has decided by popular vote to subscribe \$55,000 to the Mobile, Jackson & Kansas City Railroad, previously referred to.

Lancaster, S. C.—Railroad.—The Cheraw & Chester Railroad Co. (office, Chester) is considering the extension of its road to Lynch's River.

Napoleonville, La.—Railroad.—Surveys will be

commenced in a few days on the Bayou Lafourche Central Railroad, Limited, lately referred to. Jos. Maille, 166 Common street, New Orleans, can give information.

Newport, Ky.—Electrical Railroad.—The Newport Electrical Street Railway Co. has been organized with H. M. Healy, president, and H. Buchanan, secretary and treasurer.

Norfolk, Va.—Railroad.—The name of the Mt. Pleasant, Santee & Little River Railroad, previously referred to, has been changed to that of the Charleston, Wilmington & Norfolk Railroad. Work of examination of the country between Norfolk and the Cape Fear River is in progress. John Runk, of Wilmington, N. C., can give necessary information.

Orange Heights, Fla.—Railroad.—L. E. Barker, general superintendent of the Western Railway of Florida (office, Green Cove Springs), states in regard to the report of last week, that the extension of the road to Gainesville is contemplated, but the route is not decided upon.

Pickens, S. C.—Dummy Railroad.—J. E. Boggs, J. P. Carey, S. D. Stewart and others will, it is stated, apply for a charter for the dummy railroad previously reported as probably to be built.

Riverton, Va.—Railroad Bridge.—The Virginia Midland Railroad Co. (office, Alexandria), will, it is stated, construct a bridge across the Shenandoah river.

Roanoke, Va.—The \$50,000 necessary to secure terminal facilities for the Roanoke & Southern Railroad, lately mentioned, have, it is stated, been subscribed.

Roe, Ark.—Railroad.—Track-laying has been commenced on the Mississippi & Little Rock Railroad (office, Little Rock), previously referred to, and the company expects to push work as rapidly as possible.

San Antonio, Texas.—Electric Railroad.—The South Heights Rapid Transit Street Railway Co., reported in last issue as chartered, will build an electrical railroad 2½ miles in length.

Savannah, Ga.—Street Railroad.—The South Lake & Germantown Railway Co., lately referred to, has secured its charter.

Savannah, Ga.—Railroad.—It is stated that the Central Railroad & Banking Co. will surrender its old charter and apply for a new one allowing it increased power to borrow money.

Vinton, Va.—Dummy Railroad.—It is said that the Roanoke & Vinton Dummy Railroad will be extended through the property formerly owned by M. P. Preston, and mentioned elsewhere in this issue.

Wheeling, W. Va.—Railroad Bridge.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) has, it is stated, let contract for the construction of a double-track steel bridge across Wheeling creek.

Wheeling, W. Va.—The Wheeling Terminal Co. has been chartered by F. P. McNell, F. B. Ross, I. G. Dillon, A. M. Hamilton and A. E. Smith; capital stock \$1,000,000. The company is organized to construct a railroad from Wheeling to Fulton.

MR. T. C. DE LEON has long been recognized as one of the foremost Southern writers, and has covered a wide area in the field of literature. Some of his dramas written years ago were quite successful, and his works of fiction and contributions to the higher class of periodicals have been widely read throughout the country. His last effort, "Four Years in Rebel Capitals," is one of the many works given to the country by Mr. De Leon, and the whole story from beginning to end abounds in beautiful sketches as they occurred in the Confederacy from 1861 to 1865. The contents are of a most miscellaneous character, and from the "Forehead of the Storm" until "After the Death Blow Was Dealt," the reader is treated to a faithful portrayal of events as they occurred during the years of civil war.

MR. A. A. ULMAN, of Bay St. Louis, Miss., a manufacturer of woollen goods, writes to the MANUFACTURERS' RECORD that he has succeeded in carding, spinning and weaving ramie by means of some attachments to his woollen machinery. Ramie grows splendidly in that soil and climate, Mr. Uрман says, but at present he does not care to give the particulars as to how he has succeeded in working it.

THE citizens of Aiken, S. C., held a meeting a few days ago and took preliminary steps toward organizing a board of trade. Another meeting will be held shortly, when the organization will be effected. The people of Aiken propose to pull together for the upbuilding of their city.

Good for the Southern Tanneries.

Tanneries, bark mills and tanning extract makers in the South may expect plenty of work at remunerative prices for some time to come. Southern butchers also have reason to hope that their hides will bring more money than they have done for several years. There are various reasons for expecting a continuous advancing market. By a series of interviews with leading leather dealers in "the Swamp," the New York Commercial Advertiser has obtained many facts of much significance. These, briefly stated, are that for ten years there has been a steady decline in the market value of both hides and leather, amounting since 1879 to a shrinkage of 40 per cent. During the last twelve months there has been a decided change for the better. Tanneries have been working to their fullest capacity, yet there has no surplus leather accumulated at the two principal trade centers, Boston and New York. Consumption has evidently reached the producing capacity of the country's tanneries. Within a few weeks there has been from 12 to 15 per cent. advance in the first value of hemlock sides, and about half as much on oak and union leather. All surplus of common light union stock has been closed out, and the market is about bare. The most active season of manufacturing is now at hand, and the requirements of the Eastern and Western trade will be unprecedented for the next three or four months. This home demand, together with exports, which latter is a large factor in governing the prices of leather, is quite likely to maintain prices, and the best informed look for a still further appreciation.

Hides have already advanced a cent a pound, and are firmly held. Cow hides, which last spring were sold by Chicago packing-houses for from 4½ to 4¾ cents, now bring from 8¾ to 9 cents a pound. These last are used for upper leather or for an imitation (called "grains") of Morocco. The low prices of manufactured goods did not warrant tanners in running to their full capacity, consequently there was a large accumulation of light hides in the Chicago market. When the sole leather tanners' stocks were exhausted they bought up all this class of hides, and thus reduced the stock on which the grain and split leather tanners depended. The consequence has been a considerable advance in the prices of all grades of sole and upper leathers.

There is now said to be no surplus in the country. It has all been marketed. The extensive boot and shoe manufacturers who until eight years ago always carried large stocks of leather, have of late years bought according to their requirements, and few have stock enough to carry them through the season. The quantity of sole leather available for the next

few months cannot be increased, as it requires six or seven months to tan it thoroughly. The supply of hides is not stinted, and yet those from Buenos Ayres have recently advanced from 13½ to 15½ cents, and they are the standard for all others. All of which is encouraging news for Southern butchers, bark handlers and tanners.

BUILDING IN DALLAS.

Over Six Million Dollars Being Invested in Public and Private Construction.

DALLAS, TEXAS, August 15, 1890.

Never before in the history of Dallas was there such a vast amount of building and general improvement under way in this city. Under date of the 9th inst. the Daily Times-Herald furnishes the following itemized statement of the larger enterprises which are in course of construction or which have been contracted and are beyond the reach of doubt:

CITY IMPROVEMENTS.

The city of Dallas has the following amounts due on contracts now in force:

Water works supply fund.....\$ 92,302 98
Street, sewer and bridge fund..... 64,886 87

Total.....\$157,189 85

Amount of contracts contemplated and received official sanction:

Water works supply fund.....\$100,000 00
Street, sewer and bridge fund..... 62,472 26

Total.....\$162,472 26

SCHOOL BUILDINGS.

McKinney avenue.....\$20,000
On Ervay street..... 20,000
Corner Hall and San Jacinto..... 20,000
Corner Hall and Fuqua..... 20,000
Addition to Central High School..... 9,000
Amount of those contemplated..... 11,000

Total.....\$100,000

Total amount of work at the expense of the city government, \$419,662.11.

STREET RAILWAY IMPROVEMENTS.

North Dallas Electric, 6 miles.....\$150,000
Dallas Rapid Transit, 4½ miles..... 115,000
Dallas Electric, 4½ miles..... 100,000
Pacific Cable Construction Co..... 500,000

Total.....\$965,000

Add to this the amount sure to be expended by the Dallas Consolidated Traction Co. in the extension of lines already in operation and the construction of new lines, and the sum will reach a total of \$1,200,000.

RAILWAYS.

Texas & Pacific double track on and grading Pacific avenue and freight depot.....\$150,000
Gulf, Colorado & Santa Fe freight and passenger depot in the city and one at Oak Cliff, grading, etc..... 85,000
Dallas & Oak Cliff Railway extension..... 250,000

Total.....\$485,000

MISCELLANEOUS IMPROVEMENTS.

Dallas county courthouse.....\$365,000
Beef, pork and packery..... 100,000
Oak Cliff paper mill..... 50,000
Buggy factory..... 100,000
Catholic, Christian, Episcopal, Baptist and other churches..... 200,000
Merchants and Bankers' National Bank..... 120,000
Four county iron river bridges..... 100,000
Padgett Building, general improvements..... 75,000
Fair Association, general improvements..... 30,000
H. C. Clark Building..... 35,000
Scollard Building..... 25,000
New Commerce-street bridge..... 20,000

Total.....\$1,210,000

CONTEMPLATED IMPROVEMENTS.

The following contemplated improvements are certainly beyond a doubt. The stock of the North Dallas Cotton Mill has already been subscribed, and plans for the improvement and addition to the Windsor Hotel are in the hands of the architect:

Addition to Windsor Hotel.....\$ 60,000 00
North Dallas Cotton Mill..... 300,000 00
Arcade and market..... 100,000 00

Total.....\$460,000 00

RECAPITULATION.

Street railways.....\$1,200,000 00
Water works, streets and sewers..... 319,662 11
Public school buildings..... 100,000 00
Railways..... 485,000 00
Miscellaneous improvements..... 1,210,000 00
Contemplated improvements (sure)..... 460,000 00

Total.....\$3,774,662 11

Add to this the private buildings to be built in the next six months, estimated by the expenditures in that line the past six months, \$3,000,000, and the amount of money to be spent in improvements now in course of construction, under contract and in contemplation, and the sum reaches the enormous amount of \$6,774,662.11.

Southern Financial News.

NEW BANKS.

Abilene, Texas.—The First National Bank has increased its capital stock from \$50,000 to \$125,000.

Asheville, N. C.—Frank Coxe will, it is stated, establish a bank with a capital stock of \$100,000.

Butler, Ga.—The Butler State Bank, lately reported, has been organized, it is reported, with Elliott Dunn as cashier.

Charlotte, N. C.—A citizens' bank has been organized with a capital stock of \$50,000. A. A. Slinford can give information.

Chattanooga, Tenn.—The Security Trust Co. has been chartered.

Chesterfield, Va.—The Bank of Lawrenceville has been chartered with a capital stock of \$100,000. E. Dromgoode is president, and C. E. May, cashier.

Colorado, Texas.—The Citizens' National Bank has been organized with a capital stock of \$60,000. J. A. Walker is president, and E. H. Cooke, cashier.

Cumberland Gap, Tenn.—The Bank of Cumberland Gap, previously reported, has been organized with a capital of \$50,000. A. B. Kesterson is president, and J. E. Lauck, cashier.

Denison, Texas.—The Denison Loan & Trust Co. has been chartered with a capital stock of \$65,000.

Galveston, Texas.—The Texas Guarantee & Trust Co., previously reported, has a capital stock of \$1,000,000.

Greenville, Miss.—The People's Savings Bank & Loan Co. has been incorporated.

Greenville, S. C.—The American Bank will be organized with a capital stock of \$50,000. Henry Briggs, R. E. Allen, B. F. King and others are among the incorporators.

Houston, Texas.—F. K. Rule, of Kansas City, Mo., and associates have applied to the controller of the currency for the authority to organize the Planters' National Bank.

Huntington, W. Va.—Another savings bank is projected.

Huntsville, Ark.—A bank is being talked of.

Lenoir, Tenn.—The Lenoir City Bank has been organized with S. A. Rogers, president, and C. B. Hall, cashier.

Lipscomb, Texas.—W. H. Parker has, it is stated, organized a private bank.

Lynchburg, Va.—The Lynchburg Loan & Trust Co. has been organized with J. R. Gilliam, president.

Midlothian, Texas.—A bank is being talked of.

Nacogdoches, Texas.—The First National Bank, previously reported, has been organized with J. P. Davidson, president, and J. W. Shipman, cashier.

Roanoke, Va.—The Roanoke & Southern Guarantee Co. has been organized with J. S. Simmons, president, and A. D. Rice, secretary.

Rome, Ga.—The Rome National Bank has been authorized by the controller of the currency to commence business.

Stuart, Va.—A bank is being talked of.

Uvalde, Texas.—It is probable a bank will soon be started.

Walnut Ridge, Ark.—The Lawrence County Bank has been organized with a capital stock of \$30,000. J. M. Phelps is president.

Memphis, Tenn.—The Kansas City, Memphis & Birmingham Railroad Co. (office, Kansas City, Mo.) has executed a mortgage of all its property in favor of the Memphis Equipment Co. to secure the payment of \$1,000,000 of its 6 per cent. bonds.

Monroe, N. C., will hold an election to decide as to the issuance of \$25,000 of bonds to improve streets and erect electric-light plant.

Natchez, Miss.—The Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) has, it is stated, filed for record three mortgages, as follows: To the Metropolitan Trust Co. of New York for \$20,550,000, to secure that amount of first mortgage bonds; to the Union Trust Co. of New York for \$16,900,000, also to secure first mortgage bonds, and to the same company for \$7,894,000, to secure second mortgage bonds.

Oxford, N. C., will hold an election on September 8 to decide as to the issuance of \$50,000 of water works bonds.

Salem, N. C., will probably amend its charter providing for the issuance of about \$40,000 of bonds.

San Marcos, Texas, will issue \$4,000 of 5 per cent. 15-year bonds in favor of the Diebold Lock & Safe Co. to pay for the vault recently put in the courthouse.

The Aniston Loan & Trust Co., Aniston, Ala., has declared a dividend of 8 per cent.

The Baltimore Fire Insurance Co., Baltimore, Md., has declared a dividend of 75 cents per share, payable at the National Mechanics' Bank.

The Birmingham Brewing Co., Birmingham, Ala., will hold a meeting on August 30 for the purpose of considering the proposition of issuing

\$75,000 of bonds, to be a first lien on all property of said company.

The Second National Bank of Cumberland, Md., offers for sale Cumberland city water refunding 4 per cent. bonds, Cumberland city consolidated debt 5 per cent. bonds and Frostburg (Md.) 4½ per cent. bonds.

The Sweetwater Land Co., Florence, Ala., has declared a monthly dividend of 2 per cent.

The Watauga Water Co., Johnson City, Tenn., has sold its \$50,000 of bonds to Boardman & Jeter, Macon, Ga.

The Western Maryland Tidewater Railroad Co., at its office, Baltimore, Md., will hold a stockholders' meeting on August 27 to decide as to the issuance of bonds, etc.

Waco, Texas.—The Waco State Bank has declared a semi-annual dividend of 6 per cent.

NORTHEAST GEORGIA, with its extensive gold fields and great variety of other minerals, is attracting considerable attention at present. Gainesville is the metropolis of this section, and has a population of 5,000. Among the improvements to be found in this town are a street railroad, a Thomson-Houston electric plant, four hotels and a large number of factories. The commercial trade of Gainesville extends over an area of 100 miles, and the general merchandise handled each year amounts to more than \$1,000,000. Iron has been located in Hall and adjoining counties. Magnetic ore assaying 69 per cent. is said to abound. The late Dr. M. F. Stephenson, a well-known scientist, in one of his works speaks very favorably concerning the region near Gainesville. A very good water-power can be secured from the Chattahoochee river, three miles distant, and timber in plenty may be obtained from the surrounding forests. Two journals are supported in Gainesville, the Industrial News and the Eagle. The railroad facilities are good, and charters for twelve railroads leading from Gainesville have been granted by the legislature. Several of these, it is asserted, will be constructed this year. Gainesville also has a company known as the Gainesville Improvement Co., of which Mr. J. I. Toner is secretary.

Foreign Exchange Quotations.

ALEXANDER BROWN & SONS.

BALTIMORE, August 20, 1890.

Sterling.—	Commercial.
Selling.	48½@48¾
60 days..... 48¾	
3 days..... 48¾	
France.—	Commercial.
Selling.	524½@523¾
60 days..... 520¾	
3 days..... 518¾	
Richmond.—	Commercial.
Selling.	94½
60 days..... 95½	
3 days..... 95½	
Guider.—	Commercial.
Selling.	39½
60 days..... 40½	
3 days..... 40½	

JOHN L. WILLIAMS & SON, BANKERS, RICHMOND, VA.

Our Manual of Investments for 1890, the largest work of the kind published by any banking house in America, (406 pages, octavo, cloth), may be had without charge by clients, correspondents and those expecting to do business with us; by others at \$2 per copy.

Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., August 19, 1890.

	BID.	ASKED.
North Carolina 4's, 1910.....	99½	101
North Carolina 6's, 1919.....	127½	128
Virginia New 3's, 1937.....	70½	70¾
Danville 5's.....	100	103
Lynchburg, Va., 5's, 1915.....	104	105
Petersburg, Va., 5's, 1918.....	104	105
Norfolk, Va., 5's, 1911.....	104	105
Richmond, Va., 5's, 1922.....	110	112
Atlanta & Charlotte Ry., 1st 7's, 1907.....	121	122
Atlanta & Charlotte G'd 6's, 1900.....	105½	107
Char., Col. & Aug. R. R. Gen. 6's, 1932.....	109	110½
Georgia Pacific Ry. 1st 6's, 1922.....	113½	115
Georgia Pacific 2d 5's, 1923.....	75	79
Ga. Pacific Income, 5's.....	30	30
Petersburg Railroad Class A 5's, 1926.....	104	105
Petersburg Railroad Class B 6's, 1926.....	109	110
Rich. & Danville R. R. Gold 6's, 1915.....	115½	116
West N. Car. R. R. G'd 6's, 1914.....	101	102
Northwestern N. Car. R. 1st 6's.....	103½	104
Atlanta & Charlotte R. R. Stock.....	100	102
North Carolina Railroad Stock.....	103	104
R. F. & Pot. R. R. Div'd Obligations.....	113	115
Virginia Midland Railway Stock.....	33	34
Sloss Iron & Steel Co. Stock.....
Sloss Iron & Steel Co. 1st 6's.....
Sloss Iron & Steel Co. 2d 6's.....

SOUTHERN STOCKS.

OFFICIAL QUOTATIONS BIRMINGHAM STOCK EXCHANGE.

Corrected Weekly by MARTIN & LEEDY, Stock and Bond Brokers, and Members Birmingham Stock Exchange.

SATURDAY, AUGUST 16, 1890.

STOCKS.		LAST DIVIDEND.	
BANKS.	Organized.	Capital	Par Value.
Alabama National	1886	\$500,000	100
American National	1887	250,000	100
Bank of Atlanta	1889	50,000	100
Berney National	1886	300,000	100
Birmingham National	1887	250,000	100
Central Savings	1889	50,000	100
City National	1889	100,000	100
First National	1884	250,000	100
First National Bank of Gadsden	1887	50,000	100
Jefferson County Savings	1885	150,000	100
Birmingham Trust & Savings Co.	1887	500,000	100
Mutual Loan & Trust Co.	1888	50,000	100
People's Savings Bank & Trust Co.	1885	50,000	100
RAILROADS.		LAST DIVIDEND.	
Birmingham Union Railway Co.	1887	1,000,000	50
Birmingham & Ensley Railway Co.	1887	500,000	50
North Birmingham Street R. R.	1887	65,000	50
Highland Avenue & Belt R. R. Co.	1887	1,000,000	100
South & North Alabama R. R. Co.	1887	1,000,000	100
MISCELLANEOUS.		LAST DIVIDEND.	
Avondale Land Co.	1884	150,000	100
Anniston City Land Co.	1887	3,000,000	100
Alabama Coal & Iron Co.	1889	1,000,000	100
Alabama-Connellsville Coal & Coke Co.	1886	500,000	100
Alabama Rolling Mill Co.	1887	250,000	100
Bessemer Land Co.	1887	2,500,000	100
Birmingham Mining & Mfg. Co.	1887	150,000	100
Birmingham-Ensley Land Co.	1886	450,000	100
Birmingham Ice Factory	1886	85,000	100
Birmingham Water Works Co.	1887	500,000	100
Birmingham Soap Works Co.	1886	50,000	100
Brooklyn Land Co.	1886	1,400,000	100
Birmingham Furnace & Mfg. Co.	1886	1,500,000	100
Camille Gold Mining Co.	1887	1,500,000	100
Cahaba Coal Mining Co.	1887	1,400,000	100
Chattanooga East End Land Co.	1887	1,000,000	100
DeBardeleben Coal & Iron Co.	1887	4,000,000	100
Decatur Land Imp. & Furnace Co.	1887	5,000,000	100
Decatur Mineral Land Co.	1887	350,000	100
Elyton Land Co.	1871	200,000	100
Edison Electric & Illuminating Co.	1886	100,000	100
East Birmingham Land & R. R. Co.	1886	1,000,000	100
East Lake Land Co.	1886	300,000	100
Ensley Land Co.	1886	10,000,000	100
Enterprise Manufacturing Co.	1886	100,000	100
Eureka (Furnace) Co.	1886	100,000	100
Florence Land & Mining Co.	1887	3,000,000	100
Gadsden Land Co.	1887	3,000,000	100
Gate City Land Co.	1887	100,000	100
Hecla Coal Co.	1888	300,000	100
Henderson Steel & Mfg. Co.	1887	100,000	100
Jefferson Building & Improvement Co.	1887	150,000	100
Jagger-Townley Coal & Coke Co.	1887	300,000	100
Leeds Land Co.	1887	150,000	100
Mag. Ellen Coal & Mining Co.	1887	100,000	100
Mary Lee Coal & Railway Co.	1888	500,000	100
North Birmingham Land Co.	1886	700,000	100
Smithfield Land Co.	1886	850,000	100
Sloss Iron & Steel Co.	1887	4,000,000	100
South Anniston Land Co.	1887	750,000	100
Sheffield Coal & Iron Co.	1883	1,000,000	100
Thompson Brick Co.	1887	20,000	100
Tennessee Coal & Iron Co.	1887	9,000,000	100
Tennessee Coal & Iron Co., pref.	1887	1,000,000	100
Tuskaloosa Coal, Iron & Land Co.	1887	1,000,000	100
Vulcan Coal & Coke Co.	1886	100,000	100
West End Land Co.	1886	175,000	100
Woodstock Iron Co.	1887	3,000,000	100

BONDS.		INTEREST.	
Amount Outstanding.	Rate Per Cent.	Bid.	Asked.
Alice Furnace	7	103	100
Birmingham Gas & Electric Light Co.	8	103	100
Birmingham Union Railway Co.	6	92 1/2	100 1/2
Birmingham Water Works	6	108	100
Cahaba C. & M. Co., 1st Mortgage	7	111	116
Caldwell Hotel	8	97 1/2	100
Elyton Land Co., Trust Bonds	6	99 1/2	98 1/2
Eureka (Furnace) Co.	7	109	102 1/2
Henderson Steel & Mfg. Co.	7	106	77
Mary Pratt Furnace	6	106	100
Sloss Iron & Steel Co., 1st Mortgage	6	106	100
Tennessee Coal, Iron & R. R. Co.	6	96 1/2	100
Tennessee Division	6	100	100
Birmingham Division	6	100	100

EXPLANATION.—a—For six months. q—Only dividend declared since organization. x—This company declared 5 per cent. February 1 also. z—Total dividends paid, 49 per cent. l—Dividend for one year, ending July 1, 1889. E—Sold hereafter Ex. 15 per cent. dividend. o—Dividend 3 per cent. paid in May, '87, also October 1. n—Fifty per cent. dividend on Union R. R. Stock. h—Payable October 15, 1889. f—A 5 per cent. dividend has been paid quarterly since organization. w—For dividends refer to the company. * * May 6, '87, 50 per cent. cash; May 10, '87, 50 per cent. cash; Sept. 14, '87, 50 per cent. cash; Oct. 10, '87, 10 per cent. cash; Oct. 10, '87, 10 per cent. cash; Nov. 10, '87, 10 per cent. cash; Nov. 10, '87, 1200 per cent. in Elyton Land Company's Trust Bonds.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, August 20, 1890.

BID.	ASKED.
Virginia 6's Consols C	52
Virginia 3 1/2 10-40's	39
Virginia 3's, new	70 1/2
N. Carolina 4's	100
N. Carolina 6's	129
Norfolk Water 8's C	131
Wil., Col. & Aug.	110
Ga. Car. & N. 5's	102
Wil. & Wel. Gold 7's	115
Wil. & Wel. 5's	110 1/2
Atlanta & Char. 1st 7's	122 1/2
Atlanta & Char. Income 6's	105 1/2
Col. & Green. 1st 6's	107 1/2
Col. & Green. ad 6's	87
Va. Midland, ad. 6's	119
Charlotte, C. & Aug. ad 7's	118
West Va. Central 1st 6's	109
Ga. Pacific 1st 6's	111 1/2
Ga. Pacific ad. 6's	79
Cape Fear & Y. Valley 6's, A.	105 1/2
Cape Fear & Y. Valley 6's, B.	103
Cape Fear & Y. Valley 6's, C.	104 1/2
Consolidated Gas Stock	51
Consolidated Gas Bonds 6's	114



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*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

✉ In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Alabama City (P. O. at Gadsden)—Chair and Furniture Factory.—A chair and furniture factory will, it is stated, be erected.

Anniston—Furniture Factory.—H. G. Bon, of Syracuse, N. Y., is investigating with a view to establishing a furniture factory.

Avondale—Furniture Factory.—W. H. Morris, of Birmingham, will, it is reported, organize a stock company to erect a furniture factory.

Bessemer—Hardware Factory.—F. H. West is reported as organizing a stock company in Milwaukee, Wis., to establish a plumbers' hardware factory in Bessemer.

Birmingham—Ice Factory.—The People's Ice Manufacturing Co., 208 20th street, lately mentioned, will receive bids until August 25 for the erection of a 60-ton ice machine plant.

Birmingham—Tannery.—A stock company has, it is stated, been organized and purchased site to erect a tannery.

Birmingham—Plow and Implement Factory.—Carl Jensen, Reed Williams and others have, it is reported, purchased the old bolt and nut factory and will establish a plow and agricultural implement factory.

Birmingham—Electric-light Plant, &c.—J. F. B. Jackson, R. M. Mulford and Robert Jemison have incorporated the Consolidated Electric Light Co. to manufacture and sell electrical power and appliances. It is also authorized to manufacture gas for fuel and lighting purposes. The capital stock authorized is \$500,000.

Birmingham—Electric-light Plant, &c.—It is stated that the Edison Electric Light Co. and the Birmingham Electric Light & Gas Co. will consolidate.

Brewton—Saw Mill.—The Harold Mill Co. is reported as putting new machinery in its saw mill.

Chunchula—Saw Mill.—O. T. Casseberry has erected a new saw mill.

Clinton—Bridge.—The Southern Bridge Co., of Birmingham, has received contract to construct an iron bridge at Clinton.

Davisville—Silver Mine.—A silver mine on the property of William Pollard will probably be purchased and developed.

Dolive—Saw Mill.—J. A. Carney, of Carney, is reported as to erect a saw mill at Dolive.

Fort Payne—Ice Factory.—The Fort Payne Ice & Storage Co. will probably enlarge its ice factory.

Fort Payne.—The York Syndicate has been organized with S. F. Shaw as president; George Mayo, vice-president, and T. P. Pierce, secretary. The capital stock is \$25,000.

Greensboro—Electric-light Plant.—The Greensboro Electric Light Co. is the name of the stock company lately reported as organized to erect an electric-light plant. The capital stock is \$5,000.

Helena—Rolling Mill.—The Shelby Rolling Mill Co. is reported as putting bar mill rolls in its rolling mill.

Littleville—Iron Mines.—Samuel L. and S. T. Vourtree, of St. Louis, Mo., are reported as leasing from R. A. Solomon, of Sheffield, and to develop iron ore land near Littleville.

Marietta—Coal Mine.—The J. E. Cook Mining & Manufacturing Co. has been organized to open a coal mine.

Opelika—Land.—L. P. Grant and Albert Steiner, of Atlanta, Ga.; I. L. Dean and others have incorporated the L. P. Grant Land Co. to improve and

lay off into lots the L. P. Grant property of 210 acres of land, purchased for \$40,000. The capital stock is to be \$50,000.

Selma—Electric-light Plant.—The Selma Electric Light & Gas Co. will put in an incandescent plant, as lately reported.*

Sheffield—Land, &c.—It is stated that a syndicate represented by S. T. Prince, of Mobile, and S. B. Cornico, of New York, has made a proposition to purchase the properties of the Sheffield land companies, and, if it is accepted, will at once expend \$3,000,000 on improvements.

Town Creek—Levee.—It is stated that a 15-foot levee is being built.

Troy—Water Works.—The Troy Water Supply Co., recently mentioned, will, it is reported, at once sink an artesian well.

ARKANSAS.

Fayetteville—Lead and Zinc Mines.—The Washington County Mining Co. is the name of the company reported in last issue as organized by J. P. Wood and others to develop lead and zinc mines.

Fort Smith—Water Works.—It is stated that Kansas City (Mo.) capitalists have purchased the water works of the Fort Smith Water Co. and are enlarging same.

Redfield—Saw Mill.—S. W. Crawford & Co. erected a saw mill, as reported in last issue.

Weiner—Saw Mill, &c.—S. J. Tomlinson and R. T. Walker, of Lapeer, have organized the Michigan Lumber Co. and, it is stated, purchased the Wiener saw mill, will operate same and erect another.

Wilmar.—The Gates Lumber Co. has been incorporated with A. H. Gates, president; P. V. Gates, vice-president, and E. W. Gates, secretary. The capital stock is \$50,000.

FLORIDA.

Bartow—Packing-house, &c.—A stock company will probably be organized to erect a packing-house, cold-storage and refrigerating plant.

Bohemia (P. O. Pensacola)—Shingle Mill.—Faxon, O'Leary & Taylor will erect a shingle mill, as reported in last issue, with capacity for from 150,000 to 170,000 per day.

Dade City—Canning Factory.—It is stated that a canning factory will be established.

Fernandina—Ice Factory.—A stock company has been organized with Fred. Fisher, of Cincinnati, Ohio, president, and W. H. Lefils, of Fernandina, general manager, to erect the ice factory recently mentioned. A 10-ton ice machine has been ordered. The capital stock is \$30,000.

Florida—Phosphate Mines.—D. D. Rogers, of Ocala, writes that he is developing 93,800 acres of phosphate land in Gadsden, Liberty and Wakulla counties, also 15,000 acres in Jefferson, Madison and Taylor counties, and is prospecting preparatory to mining tracts in Marion, Alachua, Citra and other counties.

Foster Park—Phosphate Mines.—M. E. Gillett and Eph. Carney, lately mentioned (under Summerfield), did not purchase any phosphate land, but are taking steps preparatory to the organization of a company to develop phosphate on their property.

Jacksonville—Phosphate Mines.—The Boca Grande Phosphate Co. has been incorporated by W. H. Coxart and E. V. Williams, of Augusta, Ga.; J. P. Taliaferro, Frederick Bettelini and others, of Jacksonville. The capital stock paid in is \$25,000.

Jacksonville—Brick-yard, &c.—The J. R. Tysen Commercial Co., with a capital stock of \$100,000, has been incorporated with J. R. Tysen as president; Samuel Barton, of New York, vice-president, and B. B. Pope, secretary, to carry on a general commercial business. It is also authorized to manufacture brick.

Jacksonville—Fertilizer Factory.—The Jacksonville & Peace River Phosphate Co., reported in last issue, has purchased 1,500 acres of phosphate land embracing 10 miles of Peace river, and will develop same. The company contemplates erecting a fertilizer factory on the Charlotte Harbor Division of the South Florida Railroad.

Jacksonville—Phosphate Mines.—The Black River Phosphate Co. has been incorporated with a capital stock of \$200,000.

Key West—Sewerage System.—The date of opening bids for the construction of the sewerage system recently mentioned has been extended to October 1st.

Marion County—Phosphate Mines.—G. H. Sutherland, of Gainesville, is endeavoring to organize a company to develop the phosphate lands lately reported as purchased by him.

Minneola—Corn Mill.—M. P. Godfrey will, it is reported, erect a corn mill.

Ocala—Wagon Factory.—N. J. Kingman has recently completed a new carriage factory.

Orlando—Cigar Factories.—It is rumored that

two Ybor City cigar factories will remove to Orlando.

Sampalo—Ginnery.—Theodore Randell, mentioned in last issue (under Madison), will erect a cotton ginnery as stated.

Stage Pond—Phosphate Land.—J. P. Lewis is reported as having purchased 40 acres of phosphate land from Mr. Leak.

St. Andrew's Bay—Hat and Mattress Factory.—Mrs. S. Saper contemplates establishing a palmetto hat and mattress factory.*

St. Augustine—Bridge, &c.—C. P. Carver, J. T. Brundage and Matthew Hays have incorporated the St. Augustine Bridge & Driving Park Co. to construct a driving park and build a bridge.

St. Francis—Saw Mill.—L. H. Harris, of Pittsburgh, Pa., purchased the saw mill of A. L. Wellman, as stated in last issue (under Beresford), and will remove same to St. Francis.

Tampa—Phosphate Mines.—The Sterling Phosphate Mining Co. has been incorporated by F. B. Squire, of Brooklyn, N. Y.; John White, Jr., of Baltimore, Md.; M. C. Berdell, of Washington, D. C., and others. The company owns 1,490 acres of land in Hernando, Polk and Hillsborough counties, and has a capital stock of \$3,000,000.

GEORGIA.

Albany—Cotton Mill.—The erection of a cotton mill by a \$200,000 stock company is projected.

Americus—Brewery.—A stock company will probably be organized to erect a brewery. Thos. Troy, of Macon, can give information.

Americus—Water Works.—It is stated that a reservoir with a capacity of 88,000 gallons will be built at the pumping station of the water works. The mayor can give information.

Americus—Cigar Factory.—C. S. Warnock, of Newton, Ala., mentioned in last issue, is reported as organizing a stock company to move the cigar factory of Warnock & Miller, of Newton, Ala., to Americus.

Americus—Manufacturing.—The Union Investment & Manufacturing Co. has been organized with J. W. Stapleton as president, to do a general lumber business. The capital stock authorized is \$20,000,000.

Athens—Tool Factory.—An edge tool factory will, it is reported, be established.

Atlanta—Marble Works.—It is rumored that the American Marble Co., of Marietta, will move its marble works to Atlanta.

Atlanta—Broom Factory.—H. K. W. Cheders has, it is reported, established the Veteran Broom Works to manufacture brooms.

Atlanta—Publishing.—A \$5,000 stock company has been organized with J. B. Goodwin, president, to publish a journal in the interests of secret societies.

Atlanta—New Town.—The Ellen N. Land Co. has purchased suburban land and will build a town to be called Ellen N.

Atlanta—Brick Works.—W. F. Parkhurst is organizing a \$250,000 stock company to establish paving brick works.

Atlanta—Ice Factory.—S. S. Jerome, agent of Armour & Co., of Chicago, Ill., writes that the erection of the 100-ton ice factory mentioned in last issue is at present an unsettled question.

Augusta—Bridge.—The city is receiving bids for the construction of the Howe truss bridge across the canal mentioned in last issue. The mayor can give information.

Augusta—Land, &c.—The North Augusta Land Co., recently mentioned, has been incorporated.

Barnesville—Laundry.—A Newnan party is investigating with a view of establishing a steam laundry in Barnesville.

Boston—Phosphate Mines.—The Georgia Mining & Phosphate Co. is the name of the company reported in last issue as purchasing the Fay phosphate lands.

Bunkley—Land.—The Cumberland Island Co. has been incorporated by G. W. Duncan, of Macon, and L. P. Hillyer, mentioned in last issue as having purchased Cumberland island, and others. The capital stock is \$165,000.

Cartersville—Brick Works.—Hiram Blaisdell is reported as organizing a stock company to erect \$50,000 brick works.

Cedartown—Land Improvement.—The land company mentioned last week has been organized as the Cedartown Land Improvement Co. with E. M. Wistar, president, and Charles Adamson, secretary, both of Philadelphia, Pa.

Columbus—Garbage Crematory.—It is stated that the city will erect a garbage crematory. The mayor can give information.

Columbus—Sewerage System.—The city will commence in the fall the construction of the sewerage system referred to in last issue. The estimated cost is \$100,000. D. P. Dozier, mayor, can give particulars.

Cordele—Machine Works.—C. C. Stewart, of Brooklyn, N. Y., will probably make efforts to establish a woodworking machinery plant in Cordele.

Ellijay—Hub and Spoke Factory.—The Evans Land & Lumber Co., previously mentioned, will probably erect a hub and spoke factory.

Emerson—Paint Factory.—The Kennesaw Refining Works has, it is reported, added a paint factory to its refinery.

Emerson—Water Works, &c.—A cotton gin will, it is rumored, be erected and water works constructed.

Gainesville—Marble Quarry.—A marble quarry will, it is reported, be opened.

Kensington—Iron Furnace, Cotton Mill, etc.—F. R. Pemberton, president of the Kensington Land Co., of Chattanooga, Tenn., which is building the new town of Kensington, claims that contracts have been signed for the erection of a 20,000-spindle cotton mill, a rolling mill, iron furnace, foundry and machine shops, and a handle and stave factory. He also states that negotiations are pending for a shoe factory, pipe works and another cotton factory.

La Grange—Lime-kiln.—Louis Boseo is reported as erecting a lime-kiln with a capacity of 120 barrels per day.

Macon—Canal.—The Macon Canal & Manufacturing Co., mentioned in last issue, has, it is stated, decided to commence at once the survey of the route for its proposed canal so as to commence construction at an early date. The company has a capital stock of \$1,000,000.

Macon—J. C. Eads and J. N. Neal, of Bibb, and J. W. Reed, of Fulton, have incorporated the Neal Shoe Co. with a capital stock of \$5,000.

Macon—Electric-light Plant.—The Central City Guano Co. has contracted with the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., for a 50-light incandescent electric-light plant.

Marble Hill—Marble Mill and Quarry.—The Piedmont Marble Co., lately mentioned (under Jasper), is opening and will develop a marble quarry; also erect a marble mill.*

Milledgeville—Water Works.—The Moran Springs property is reported as sold for \$5,000 to parties who will construct water works to cost \$100,000.

Newnan—Mattress Factory.—The mattress factory referred to last week was established by McBride & Co.

Rome—Furniture Factories.—The Cundell Furniture Co., mentioned in last issue as to operate the Etowah Furniture Factory, also operates the Rome Furniture Factory.

Rome—Bridge, &c.—J. C. Foster will receive bids until September 1 for the grading of the road to Veal's Ferry and the construction of a bridge over the Coosa river.

Rome—Excelsior Factory.—The establishment of an excelsior factory near Rome is projected. Rounsaville & Bro. can give information.*

Savannah—Ice Factory, &c.—W. G. Cooper is president of the Chatham Manufacturing Co., lately reported, and it contemplates the erection of a 100-ton ice factory instead of 50 tons, as at first decided.

Savannah—Manufacturing.—Paul Decker, A. R. Faucett, B. Gails and others have incorporated the Liberty Manufacturing Co.

Savannah.—The People's Land & Investment Co., lately reported, has been organized with H. C. Davis, president; J. B. Withers, vice-president, and J. T. Rowland, secretary.

Savannah—Real Estate, &c.—J. M. Bryan and J. F. Brooks have incorporated the Ogeechee Co. to purchase and improve real estate, &c. The capital stock is \$50,000.

Way Cross—Carriage Factory.—Mr. Munn, of Brunswick, has, it is reported, established a carriage factory in Way Cross.

Washington—Electric-light Plant.—It is stated that contract has been awarded for the erection of the incandescent electric-light plant previously reported.

KENTUCKY.

Earlington—Electric-light Plant.—An electric-light plant will, it is stated, be erected.

Fordsville—Flour Mill.—The Fordsville Flouring Mills will, it is reported, put roller machinery in its flour mill.

Georgetown—Gas Works.—The Georgetown Water Co. bought out the Georgetown Gas Light Co., as stated in last issue. It also owns the electric-light plant.

Grayson—Stave Mill.—George Stephens & Co. erected a stave mill as stated in last issue.

Louisville—Packing-house.—Conrad & Seiler will, it is stated, rebuild their pork-packing house, reported in this issue as burned.

Louisville—Distillery.—The Kentucky Distilling Co. will probably rebuild its whiskey distillery, reported in this issue as burned.

Louisville—Water Works.—The Domestic Water Works Co., reported in last issue as chartered, is ready to contract for machinery.*

Middlesborough—Bridge.—It is proposed to construct a through girder iron bridge of about 70 feet span and 100 feet width across the canal on Cumberland avenue. B. L. Lloyd, city engineer, can be addressed.

Middlesborough—Fire-brick Works.—The Garnick Fire Brick Co., previously reported, has increased its capital stock to \$150,000.

Middlesborough—Woodworking Factory.—The Middlesborough Novelty Wood Works has been organized, and is, it is stated, erecting a two-story building, 40x80 feet, for the manufacture of all kinds of fancy woodwork.

Morganfield—Distillery.—The Rich Grain Distillery will, it is reported, improve its whiskey distillery and erect a \$10,000 addition to same.

Newport—Water Works.—Specifications have been completed for the reconstruction and repair of the reservoirs at the city water works referred to in last issue. Bids will be received until September 8 by C. L. Jugerman, superintendent.

Paris—Bridge.—The county court is receiving bids for the construction of an iron bridge not to exceed \$5,000 in cost.

LOUISIANA.

Algiers—Brewery.—It is stated that the Algiers Brewing Co., recently reported under New Orleans, has purchased site in Algiers for the erection of its brewery for \$2,500.

Baton Rouge—Publishing.—The Baton Rouge Publishing Co. has been organized with a capital stock of \$20,000.

Covington—Pottery.—The Covington Pottery Co., recently reported as organized, has been incorporated with a capital stock of \$12,000.

Monroe—Brick and Sewer pipe Works.—The Monroe Brick Co. has been incorporated to manufacture brick, tile, sewer pipe, &c. The capital stock is \$50,000.

New Orleans—Gas Works.—The United States Light & Heat Co. has been incorporated with A. A. Woods as president and R. L. Heflin, vice-president, to construct gas works, &c. The capital stock is \$500,000.

New Orleans—Bakery.—The American Biscuit & Manufacturing Co., of Chicago, Ill., has purchased the steam bakery of Bernard Klotz & Co.

Plaquemine—Ice Factory.—The stock company previously reported as organized to erect an ice factory has a capital stock of \$12,000.

Vidalia—Ice Factory.—An ice factory will probably be erected.

MARYLAND.

Baltimore—Bridge.—The construction of a bridge 2,000 feet long over Druid Lake in Druid Hill Park, is proposed. The mayor can give information if anything is done.

Calvary—Flour Mill.—The flour mill of James Webster is being remodeled.

Chestertown—Canning Factory.—Rice, Lamotte & Co. will, it is reported, establish a canning factory.

Elkton—Manufacturing.—It is rumored that a manufactory to have a capital of \$1,000,000, and employ 500 men, is to be located in Elkton.

Hagerstown—Paint Mill.—The Rock Mineral Paint Co., of Cleveland, Ohio, has, it is reported, purchased site and will erect a paint mill in Hagerstown.

Hagerstown—Land.—H. H. Keedy and others purchased the Reynolds property, as stated in last issue, and will lay it off in building lots.

Hagerstown—Bicycle Factory.—Crawford & Co., of Washington, D. C., will, it is reported, remove their bicycle factory to Hagerstown.

Frederick—Ice Factory.—The stock company lately mentioned has been organized as the Frederick Ice Co. by E. B. Hay, of Washington, D. C.; W. T. Hildrup, Jr., of Harrisburg; F. W. Obendorfer and others. The capital stock is \$15,000.

Mechanicstown—Carriage Factory.—I. M. Fisher is reported as enlarging his carriage factory.

Washington, D. C.—Brick Works.—A. Gleason, James Lansburg, C. C. Duncanson and others have incorporated the Ivy City Brick Co. with a capital stock of \$300,000.

MISSISSIPPI.

Grenada.—It is stated that the Grenada Improvement Co. has been organized.

Holly Springs—Lands, etc.—T. J. Malone, R. H. Peel, A. M. West and others have incorporated the Quitman Springs Co. to purchase and develop the Quitman Springs.

NORTH CAROLINA.

Burlington—Cotton Mill.—The Aurora Cotton Mill will, it is reported, be enlarged.

Cane Creek—Nathan Stafford and G. W. Sylvester, of Clover Orchard, and W. P. Beall have incorporated the Cane Creek Quarry Co. with a capital stock of \$6,000.

Charlotte—Shoe Factory.—The stock company mentioned in last issue as organized by W. E. Holt, J. S. Spencer and J. C. Smith has been incorporated as the Queen City Shoe Co. to manu-

facture shoes, harness and saddles. The capital stock is \$50,000.

Durham—Iron Foundry and Machine Shop.—The establishment of a co-operative iron foundry and machine shop is contemplated.

Goldsborough—Broom Factory.—F. H. Bain contemplates starting a broom factory.*

Greensboro—Real Estate, etc.—T. C. Worth, E. P. Wharton, J. C. Worth and others have incorporated the Worth-Wharton Real Estate & Investment Co. with a capital stock of \$150,000.

Greensboro—Oil Well.—It is stated that an oil well will be sunk near Greensboro.

Haw River—Flour Mill.—Thomas M. Holt has awarded contract for the erection of the 50-barrel roller flour mill mentioned in last issue.

Hillsboro—Granite Quarry.—R. E. Lyon will, it is stated, open a granite quarry.

Littleton—Canning Factory.—W. A. Johnston is reported as erecting a canning factory.

Monroe—Electric-light Plant, &c.—The city will hold an election to decide upon the issuance of \$25,000 of bonds to improve streets and erect the electric-light plant recently mentioned.

Monroe—Brick-yards.—It is stated that two brick-yards have been established.

New Berne—Laundry.—A steam laundry will, it is stated, be erected.

Ninety-Six—Cotton Gin and Oil Mills.—A cotton gin and two cotton-seed oil mills are reported as being erected.

Oxford—Water Works.—The election reported last week to consider the issuance of \$50,000 of bonds for the construction of water works will be held September 8.

Price's Store—Silver and Iron Mines.—Breen & Freely will, it is reported, develop silver and iron mines.

Raleigh—Ice Factory.—J. H. Wiggins, of New York, lately reported as having purchased the Jones & Powell Ice Factory, has organized the Raleigh Plate Ice Co. to operate it.

Salem—Street Paving.—The city will probably amend its charter authorizing the issuance of \$40,000 to \$50,000 of bonds for paving streets. H. E. Ives, mayor, can give information.

Salisbury—Spool-head and Shuttle-block Factory.—Peacock & Barrier, of China Grove, will, it is reported, remove their spool-head and shuttle-block factory to Salisbury.

Swain County—Timber Lands.—C. E. Graham, Natt Akinson and J. M. Thrash have, it is reported, purchased the Whittier timber lands of 70,000 acres.

Wilmington—Rock Quarries.—The city is developing rock quarries to pave the streets.

Winston—Brick Works.—Northern parties are reported as to build large brick works.

SOUTH CAROLINA.

Anderson—Fertilizer Factory, Oil Mill, &c.—It is stated that the Anderson Ginning & Manufacturing Co. has secured site for and will soon commence work on its fertilizer factory and oil mill mentioned in last issue.

Anderson—Electric-light Plant.—The Anderson Hotel Co. will put in a 200-light incandescent electric-light plant.*

Charleston—Laundry Machinery Works, etc.—A. S. Emerson, mentioned in last issue, E. V. Emerson, W. M. Connor and others have incorporated the Emerson Laundry Machinery Co. to establish a steam laundry, manufacture laundry machinery, etc. The capital stock is \$100,000.

Chester—Mills.—The Lockhart Shoals Construction Co., reported elsewhere in this issue as chartered, is privileged to erect mills.

Columbia—Water Works.—The water works committee recommends the purchase of water wheels and pumps to the amount of \$25,000 to increase the supply of water. The city council has received a proposition to construct a filtering plant.

Edgefield—Electric-light Plant.—The Edgefield Gin & Mill Co. has contracted with the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., for a 50-light incandescent electric-light plant.

Florence—Laundry.—L. O. Jones will, as lately stated, establish the Dixie Steam Laundry.

Greenville—Water Works.—The American Pipe Manufacturing Co., of Philadelphia, Pa., which has contract to construct water works in Greenville, will organize a stock company to operate same.

Laurens—Furniture Factory.—Eugene H. Wilkes and others will organize a stock company, as stated in last issue, to erect a furniture factory.*

Marion—Gin and Grist Mill.—The Marion Oil Mill Co. is erecting a grist mill and cotton gin, as reported last week.

Newberry—Oil Mill.—The Newberry Cotton-seed Oil Mill & Fertilizer Co., lately reported, has let contract to Osborne Wells for the construction of its oil mill at Gravelton. The main building will be two stories high, 60x40 feet, and the warehouse 50x40 feet.

Rock Hill—Oil Mill.—Mr. Zimmerlee is reported as having leased the oil mill of the Rock Hill Cotton-seed Oil Mill & Fertilizer Co.

Spartanburg—Electric-light Plant.—The Spartanburg Oil Co. has contracted with the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., for a 50-light incandescent electric-light plant.

Yorkville—Granite Quarries.—Frank Hafferfield, T. P. Whitesides, W. A. Courtenay, of Charleston, and others have incorporated the York Granite Co. to develop the Whiteside granite quarries which embrace 1,100 acres of land. The capital stock is \$50,000.

TENNESSEE.

Athens—Hosiery Factory.—Negotiations are pending with Eastern parties for the erection of a hosiery factory in Athens.

Bristol—Grate Factory.—I. B. Dowden, of Chattanooga, Tenn., is reported as erecting a plant for the manufacture of the Stella grate.

Cardiff—Planing Mill.—Rutan & Fraser are reported as erecting a planing mill.

Chattanooga—Grain Elevator.—The Chattanooga Warehouse & Banking Co., recently organized, proposes to build a grain elevator at once.

Chattanooga—New Town.—The South Tennessee Land Co. will build the new town of South Lowell, as stated in last issue.

Chattanooga—Insulator Pin Factory.—E. G. Willingham contemplates doubling the capacity of his insulator pin and bracket factory.*

Chattanooga—Machine Works.—The North Chattanooga Manufacturing Co. will, it is reported, erect works for the manufacture of mill machinery in North Chattanooga.

Chattanooga—Brewery.—The brewery previously reported as to be built by the Chattanooga Ice & Bottling Co. will cost about \$50,000.

Cleveland—Flour Mill.—The Cleveland Steam Flour Mill Co. has been incorporated.

Crab Orchard—Saw Mill.—Bukey's saw mill is reported as putting in new machinery.

Cumberland Iron Works (P. O. Dover)—Furnaces, &c.—The Cumberland Lands, Limited, is the name of the company mentioned in last issue as incorporated in London, Eng., and as purchasing the Cumberland Iron Works property. It proposes developing the mineral resources, building furnaces, rolling mills, etc. The capital stock is \$1,250,000. M. T. Scott, of Bloomington, Ill., can give particulars.

Cumberland Gap—Street Improvements.—The American Association, Limited, of Middlesboro, contemplates expending \$35,000 in grading and macadamizing streets.

Dyersburg—Dry-kilns.—The W. P. Hall Manufacturing Co. will rebuild its two dry-kilns destroyed by the fire mentioned in last issue.

Gallatin—Flour Mill.—The Tennessee Hub & Spoke Co., recently reported as to establish a hub and spoke factory, will not erect same at present, but will, it is stated, build a 100-barrel roller flour mill instead.

Harriman—Foundry and Machine Shops.—The Duthie Machine & Foundry Co., mentioned in last issue as to be organized to remove to Harriman and operate the plant of the Duthie Engine & Machine Shops, of Knoxville, has been incorporated by G. H. Duthie, F. W. Sanders, W. C. Harriman and others. The capital stock is \$20,000.

Harriman—Lumber Mill.—W. W. Christmas has, it is reported, purchased the lumber mill of the Harriman Lumber Co. and will improve and operate same.

Johnson City—Marble Works.—It is stated that the marble works recently reported as to be built by the Johnson City Marble Works will cost about \$40,000.

Kingston—Saw Mill, &c.—The Kingston Lumber & Manufacturing Co. is the company reported in last issue as having erected a saw mill and to add a sash, door and blind factory.

Knoxville—Bridge.—It is stated that the bridge recently reported as to be constructed over the Tennessee river by the Cherokee Land Co. will cost \$100,000.

Loudon—Marble Quarry, &c.—J. R. Dew, T. P. Rockafellow, R. M. Johnston and others have incorporated the Loudon Quarry Co., and is, it is stated, developing a marble quarry.

Luttrell—Cement Works.—The Luttrell Town Co. intends developing the cement deposit referred to in last issue and erecting machinery to prepare same for market.*

Madisonville—Gold Mines.—Gold mines will probably be developed in Monroe and Polk counties.

Memphis—Elevator and Mill.—E. C. Buchanan & Co., referred to in last issue, contemplates the erection of a grain elevator with capacity for 200,000 bushels and a corn meal mill to make about 500 barrels per 24 hours.

Memphis—Saw Mill.—The secretary of the Commercial Association is corresponding with a party who contemplates the erection of a saw mill.

Mossy Creek—The New Haven Land & Improvement Co., recently mentioned as chartered (under Daudridge), has its chief office in Mossy Creek and is organized to purchase and improve real estate.

Nashville—Electric-light Plant, &c.—The Belmont Park Co. is the name of the company recently reported as having purchased a tract of land from the Belmont Land Co. and as to probably erect an electric-light plant on same.

Nashville—Bottling Works.—The Hauck Brewing Co. has purchased site for \$20,000 on which to erect the bottling works recently reported as to be erected by John Hauck, of Cincinnati, Ohio.

Pikeville—Saw, Shingle and Planing Mill.—The Summer City Land & Improvement Co. will, it is stated, erect a saw, shingle and planing mill at Summer City.

Selmer—New Town.—The McNairy Land & Improvement Co. has been organized with R. D. Anderson, president; J. T. Warren, vice-president, and H. P. Wood, secretary, to build a new town at Selmer.

South Pittsburg—Stove Foundry.—It is stated that the South Pittsburg Stove Co., mentioned in last issue, will have a capital stock of \$12,000 and erect a stove foundry 100x160 feet.

South Pittsburg—Storage Yard.—The American Pig Iron Storage Warrant Co., of New York city, will establish a pig iron storage warrant yard in South Pittsburg.

South Watauga.—A saw mill is reported as being erected.

Sweetwater—Paint Factory.—A stock company is reported as organized to establish a paint factory.

Tulahoma—Mineral Land.—The Butler Land & Mining Co. has, it is reported, purchased through J. H. Kelly about 350 acres of mineral land near Tulahoma and leased about 15,000 acres more in Cannon, Coffee and Franklin counties.

Wilford—Flour Mill.—Bennett & Castleman are reported as putting roller machinery in their flour mill.

Winchester—Electric-light and Water Works.—G. L. Hogan & Co. are erecting an electric-light plant to cost \$10,000 and will construct water works.*

TEXAS.

Abilene—Oil Mill.—A stock company will, it is reported, erect a cotton-seed oil mill.

Alvarado—Artisan Well.—J. A. Russell, mayor, will receive bids for slaking the artesian well lately mentioned.

Alvin—Nursery.—M. V. Wright, of Houston, has commenced the erection of two greenhouses, each 40x100 feet, at his nursery.

Austin—Dam, &c.—The work on the construction of the canal and dam mentioned in last issue includes 17,000 cubic yards dimension stone masonry, 70,000 of rubble stone masonry, 75,000 of earth excavation and 55,000 of rock excavation.

Beaumont—Brick and Tile Factory.—Patillo Higgins will, it is reported, establish a brick and tile factory.

Beeville—Electric-light Plant.—It is stated that an electric-light plant will be erected.

Breunham—Sausage Factory.—Fisher & Weis will probably increase the capacity of their sausage factory.

Bryan—Electric-light Plant.—The Bryan Water, Ice & Electric Light Co., previously reported, has contracted with the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., for a 500-light incandescent electric light plant.

Cuero—Electric-light Plant.—The Cuero Oil Co. has contracted with the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., for a 50-light incandescent electric-light plant.

Dallas—Electric-light Plant and Ice Factory.—The Dallas Ice Factory, mentioned in last issue, will put in during the fall and winter a 50-ton ice machine, increasing its capacity to 140 tons per day; also an electric light plant.

Dallas—Coal Mining.—G. T. Foster, of Fort Worth; Henry Exall; J. W. Dickson and others have incorporated the Cavalon Coal & Mining Co. with a capital stock of \$50,000.

Dallas—Artificial Stone Factory.—A. Lichtenag, of New Orleans, La., will probably organize a stock company to establish a plant in Dallas for the manufacture of artificial building and paving stone.

De Kalb—Shingle Mill.—A shingle mill will, it is reported, be established.

Fort Worth—Factory.—E. W. Taylor, A. B. Smith and W. F. Lake have incorporated the McCormick Cotton Seed Delinier Co. with a capital stock of \$1,000,000.

Fort Worth—Stone Mill.—A Wichita (Kansas) company will, it is reported, establish a stone-sawing mill in Fort Worth.

Galveston—Manufacturing.—The Island City Manufacturing Co. has been incorporated with a capital stock of \$25,000 to manufacture phonographic appliances.

Galveston—Bridge.—The city will rebuild Sabine-street bridge at an estimated cost of \$5,783.56. The city engineer can give particulars.

Galveston—Electric-light Plant.—The Citizens' Electric Light Co. will, it is reported, purchase the electric-light plant of the Brush Electric Light & Power Co.

Hempstead—Oil Mill.—C. Baumgarten, of Schulenberg; Charles Armstrong and E. Hauser will erect the cotton-seed oil mill lately referred to. Machinery has been ordered.

Houston—Cistern Factory.—S. T. Gilmore will, it is stated, establish a corrugated iron cistern factory.

Houston—Sash and Blind Factory.—Sterrett & Glover are, it is reported, erecting a sash and blind factory.

Houston—Car-wheel Works.—The Dickson Car Wheel Co. will, it is reported, construct a new cupola with a capacity of 50 tons.

Marble Falls—Boot and Shoe Factory.—The Marble Falls Boot & Shoe Factory is reported as putting in new machinery.

Marble Falls—Bridge.—It is stated that a stock company will be organized to construct an iron bridge over the Colorado river.

Pearsall—Bridge.—The county commissioners have awarded contract to the Berlin Iron Bridge Co., of Berlin, O., to build a bridge across the Leona river.

Quannah—Water Works, &c.—The Quannah Water, Ice & Electric Light Co. has been incorporated to construct the water works previously mentioned, &c. The capital stock is \$75,000.

Rockport—Ice Factory.—Mr. Zilker, of Houston, and W. H. Stedman contemplate erecting an ice factory in Rockport for the purpose of freezing fish in blocks of ice.

San Antonio—Abattoir.—The Union Slaughter House Co. has been incorporated by J. Price, G. W. Saunders, William McDonald and others. The capital stock is \$25,000.

San Antonio—Builders' Supplies.—The San Antonio Builders' Supply Co., with a capital stock of \$100,000, has been incorporated by J. E. Martin, Joseph Boehlve and James Simpson.

San Antonio—Salt Wells.—The Titus Machine & Tool Co., lately reported, has struck a salt well furnishing 1,500 gallons per hour and yielding 16 ounces of salt per gallon. It will sink four more wells.*

Sardis—Cotton Gin, &c.—A cotton gin and gariat mill will, it is reported, be erected.

Sherman—Oil Mill.—A castor-oil mill will probably be established.

Terrell—Electric-light Plant.—The stock company referred to in last issue was organized as stated to erect an electric-light plant and has awarded contract for same. John L. Terrell, mayor, can give particulars.

Tyler—Jelly Factory.—A jelly factory is reported as to be established.

Tyler—Lumber Mill, &c.—S. B. Fish, S. J. Mings, of Gatesville; J. Boyd, of Gilmer, and others have incorporated the Texas Logging & Lumber Co. with a capital stock of \$42,000.

Waxahachie—Cotton Factory.—A cotton factory will, it is rumored, be erected.

Whitewright—Laundry.—A stock company is reported as organized to erect a steam laundry.

Yoakum—Ice Factory.—Mr. Morris will probably erect the ice factory lately mentioned.

VIRGINIA.

Basic City—Coal, Lumber, &c.—The Basic City Lumber & Coal Co. has been incorporated to deal in lumber, coal, coke, &c. The capital stock is \$100,000.

Bedford City—Knitting Mill.—S. H. Markley, of Columbia, S. C., lately referred to, is erecting a 100-machine knitting mill.

Bedford City—Planing Mill, etc.—Marable & McCurdy will erect the planing mill and sash, door and blind factory lately reported.*

Bickley's Mills—Woolen Factory.—J. C. Nutty is investigating with a view to establishing a woolen factory.

Big Stone Gap—Brick-yard, &c.—It is probable that the Big Stone Gap Building & Investment Co. will operate a brick-yard and planing mill.

Blackstone—Publishing.—S. P. Epes intends publishing a newspaper.*

Botetourt County—Marble Quarry.—H. H. Powers & Co., of Radford, expect to organize a stock company to develop the black marble quarry mentioned in last issue.

Bridgewater.—The Bridgewater Prospecting & Improvement Co. has been organized.

Buchanan—Bridge.—William Jolliffe is receiving bids for constructing the approaches for the James-river bridge. The approaches will consist of two wooden railroad trestles, one about 400 and the other about 1,000 feet long; also four highway inclines about 250 feet each.

Claremont—Cider Mill.—W. H. Somers is reported as enlarging his cider mill.

Clifton Forge—Woolen Mills.—W. F. Summer-son, of Staunton, has received contract from the Clifton Forge Woolen Mills Co. to erect the woolen mill mentioned in last issue.

Cool Well—Flour Mill.—W. J. Cash has let contract for the erection of a flour mill.

Danville—Nursery.—M. Moore is building two greenhouses and will put in boiler for heating.*

Ellersburg—Fertilizer Factory.—R. R. Horne, T. B. Dunn and others have, it is stated, organized a stock company to erect a fertilizer factory.

Farmville—Coal and Iron Lands.—L. L. Cochran, of Fort Payne, Ala.; E. R. Stamps, of Raleigh, N. C., and others will probably organize the Farmville Coal & Iron Co. to purchase and develop coal and iron lands.

Farmville—Flour Mill.—Contract has been let for remodeling the Farmville Mills, recently reported.

Flat Lick—Brick-yard.—It is stated that a brick-yard has been started.

Front Royal—Ice Factory.—The erection of an ice factory is probable. Dorsey, Turner & Campbell can give information.*

Front Royal—Printing and Publishing.—Stephen Harnsberger will establish a printing and publishing house.

Front Royal—Knitting Factory.—The Front Royal & Riverton Improvement Co. has closed contract with Northern parties for the erection of a knitting factory.

Glasgow—Rolling Mill.—The rolling mill of the Lawrence Iron Works will be moved to Glasgow, as lately reported.

Glasgow—New Industries.—It is reported that negotiations have been closed with the English syndicate lately mentioned for the investment of \$1,500,000 in new industries in Glasgow. The Rockbridge Co. can give information.

Iron Gate—Brick-yard.—W. H. Billhimer & Co. have recently added new machinery to their brick-yard.

Lawrenceville—Electric-light Plant, &c.—The Lawrenceville Land & Improvement Co. has been incorporated with E. B. Lewis, president, and N. S. Turnbull, vice-president, to improve land, erect an electric-light plant, &c. The capital stock is \$10,000.

Lynchburg—Publishing.—The organization by the State Farmers' Alliance of a \$200,000 publishing company is said to be probable.

Manchester—Brick and Sewer-pipe Works, &c. The Manchester Terra Cotta & Construction Co. has been incorporated with W. I. Clopton as president; J. C. Robertson, vice-president, and G. E. Gary, secretary, to manufacture brick, terracotta, sewer pipe, &c. The capital stock is to be not less than \$5,000 nor more than \$25,000.

News Ferry—Flour Mill.—A flour mill is to be built by C. E. Ballou.

Norfolk—Fertilizer Factory.—The American Fertilizer Co. will, it is reported, move its fertilizer factory to West Norfolk.

Norfolk—Bridge, &c.—The Norfolk Co. has, it is stated, purchased the Ghent and De Brees properties, will improve same and construct an iron bridge over De Brees creek.

Norfolk—Stained Glass Window Factory.—Leonard Bush will, it is stated, establish a stained glass window factory.

Petersburg—Electric-light Plant, &c.—Thomas Pannill is reported as having purchased and improved the Harmon property. He will, it is stated, erect an electric-light plant.

Pulaski—Brick Works.—Teaney, Gitt & Co. are reported as erecting an additional building at their brick works.

Pulaski City.—R. D. Bohannon, of Columbus, Ohio, and G. V. Litchfield, of Abingdon, purchased the Cove Lithia Springs property, as stated in last issue, and will improve.

Radford—Water Works.—The Radford Water & Light Co. has been incorporated with R. P. Chew, president, and G. E. Cassel, secretary, to operate the water works previously mentioned and to erect an electric-light plant. The capital stock is \$150,000.

Richmond—Bridge and Electric-light Plant.—Contract has been awarded to the Edgemoor Bridge Works for building an iron and steel viaduct 1,300 feet long and 40 feet wide, connecting the properties of the Highland Park and Northside land companies with Richmond. It is probable that an electric light plant will be erected on the land.

Rippledmead—Iron Mines.—Daniel W. Mason is developing the Johnston iron mines near Rippledmead, as stated in last issue (under Pearisburg).

Kiverton—Cracker and Cake Factory.—A cracker and cake factory will be established. G. W. Cone can give information.

Roanoke—Stone Crushing Plant.—The Roanoke Building Stone & Pavement Co., referred to in last issue, will erect a stone crushing plant.*

Roanoke—Rolling Mill.—The Roanoke Iron Co. has let contract for the construction of the muck and bar mill previously mentioned. It is to have 30 puddling and heating furnaces and cost about \$500,000. The main building is to be 382x300 feet.

Roanoke—Bottling Works.—The Blue Ridge Bottling Works is reported as erecting steam bottling works.

Roanoke—Real Estate.—The State Investment Co. has been organized with J. A. Dupuy, president; W. S. Gooch, vice-president, and W. S. McClanahan, secretary, to deal in real estate, and has, it is stated, purchased a tract of land from the Valley Investment Co. for \$24,000. The capital stock is to be not less than \$15,000 nor more than \$30,000.

Roanoke.—The Virginia Finance Co. is the correct name of the company mentioned in last issue as increasing its capital stock from \$10,000 to \$30,000. The company was organized to deal in real estate.

Rockland Mills—Flour Mills.—The Rockland Milling Co. has been incorporated with Benjamin Cline as president; D. F. Cline, vice-president, and J. W. Cline, secretary, to operate a roller flour mill. The capital stock is \$2,500.

Smithfield—Peanut-cleaning Factory.—It is rumored that the Farmers' Alliance will erect a peanut-cleaning factory.

Staunton—Mining, &c.—The Augusta Mining & Investment Co. has increased its capital stock to \$5,000,000.

Staunton—House Factory.—The Staunton Development Co. has, it is stated, secured the location on its property of the Staunton Building Co., which will erect a building for the manufacture of frame houses.

Suffolk.—The East Suffolk Land Co., recently organized, has H. J. Keyser, of Baltimore, Md., president, and C. H. Jones, secretary. The company owns 940 acres of land, and has a capital stock of \$300,000.

Suffolk—Electric-light Plant, &c.—The Suffolk Light & Water Co. has been organized with C. H. Causey as president; E. Wilkerson, of West Point, vice-president, and C. H. Causey, Jr., secretary, with a capital stock of \$25,000. The company has contract to furnish the city with electric lights, and will erect a Thomson-Houston plant.

Suffolk—Lumber Mill.—The Messrs. Leet have, it is reported, purchased the lumber mill of the Gay Manufacturing Co., and are improving same.

Vinton—Land.—The Vinton Land & Development Co., with a capital stock of \$150,000, has been organized with T. J. Nottingham, of Norfolk, as president; J. F. Christian, vice president, and J. B. Levy, secretary, both of Roanoke. It is stated that the company has purchased the Preston farm of 500 acres, and will expend \$50,000 in improving same.

Warrenton—Electric-light Plant and Flour Mill.—A 100-barrel flour mill is to be erected, and the same power will be used to operate an electric-light plant, which will be owned by the town. C. W. Rosenberger can give information.

WEST VIRGINIA.

Alderson—Tannic Acid Factory.—H. A. Holt and A. F. Matthews, of Lewisburg, and others, previously reported as having purchased timber lands, will, it is stated, erect a tannic acid factory.

Belmont—Oil Wells.—B. H. Mallory, O. S. Jones, G. W. Brown and others are the incorporators of the Belmont & Eureka Oil Co. mentioned in last issue (under Parkersburg).

Benwood—Electric-light Plant.—The Riverside Iron Works has, it is reported, erected an electric-light plant.

Clarksburg—Flour Mill.—Post & Lynch are erecting a 50-barrel roller flour mill.

Clarkson—Coke Ovens.—The Monongah Coal & Coke Co. has, it is reported, constructed 350 coke ovens and will construct 150 additional.

Elk Garden—Flour Mill.—Isaac Oats is reported as to erect a 25-barrel flour mill.

Elm Grove—Grain Elevator.—Bedilion & Co., lately referred to, are erecting a grain elevator of about 30,000 bushels capacity.

Hinton—Land.—Henry Wex, of 501 7th street S. W., Washington, D. C., and Philip Joseph, of Baltimore, Md., will probably purchase the West estate of 10,000 acres of land near Hinton.

Lacey Spring—Flour Mill.—A 60-barrel flour mill is reported as being erected by C. H. Nicholas.

Lectown—Flour Mill.—Mrs. Anna Kendrick has awarded contract for the erection of a 30-barrel flour mill.

Milton—Flour Mill.—Harshberger Bros. are reported as putting new machinery in their flour mill.

New Cumberland—Oil Wells.—The King's Creek Oil Co., Evans & Co., Finegan & Downing and the Bridgewater Gas Co. are sinking oil wells.

Nicholas County—Mineral and Timber Land.—Edwin Holton, of Ohio, is reported as purchasing 40,000 acres of mineral and timber land at \$10 per acre from the estate of R. H. Maury.

Nickell's Mills—Flour Mill.—Contract has been awarded, it is said, by C. C. & L. A. Nickells for the erection of a 50-barrel flour mill.

Parkersburg—Oil Wells.—C. T. Caldwell, V. B. Archer, F. R. Rose and others incorporated the Ohio River Oil Co. mentioned in last issue.

Parkersburg—Timber Land.—C. D. Fewsmith, G. C. Loomis, G. C. Avery, of Louisville, Ky., and others are the incorporators of the C. D. Fewsmith Lumber Co. reported in last issue. It is stated that the company has purchased a tract of timber land for development.

Point Pleasant—Furniture Factory.—The Bentley & Gerwig Furniture Co., of Parkersburg, has been offered inducements to remove its furniture factory to Point Pleasant.

Wardensville—Flour Mill.—J. J. Jordan has, it is stated, remodeled his flour mill to the roller system.

Wheeling—Mining.—John McKelvey, of Grand Forks, N. D.; Augustus Pollack, N. B. Scott and others are the incorporators of the Little Kid Mining Co. recently reported as chartered. The authorized capital stock is \$1,000,000.

Wheeling—Electric-light Plant.—The Wheeling Electrical Co. contemplates erecting a new building for its electric light plant and doubling its capacity.

Wheeling—Cracker Factory.—The erection of a cracker factory is talked of.

Wyatt—Flour Mill.—Daniel Ashcroft has, it is reported, let contract for a 30-barrel flour mill.

BURNED.

Atlanta, Ga.—The lumber mill of the Stewart Lumber Co., near Atlanta; reported loss about \$10,000.

Atlanta, Ga.—The spring bed and lounge factory of Gholstin, Haas & Guthman; estimated loss about \$75,000.

Elkhorn, W. Va.—The freight depot of the Norfolk & Western Railroad Co. (office, Roanoke, Va.)

Greensboro, N. C.—Rutherford College; loss estimated at about \$25,000.

Gulford, Md.—The cotton mill of the Gary Manufacturing Co.; estimated loss about \$35,000.

Homer, La.—The saw mill of Dawson & Ellen damaged by explosion.

Louisville, Ky.—The pork house of Conrad & Zeiler.

Louisville, Ky.—The distillery of the Kentucky Distilling Co.; estimated loss \$800,000.

Newberry, S. C.—The saw mill on the place of Dr. W. M. Dorroh, 12 miles west of Newberry, damaged by a boiler explosion.

New Castle, Va.—The dry-kiln of R. T. Slusser.

Parham's Store, Va.—The grist mill and cotton gin of I. M. Tynes.

Savannah, Ga.—The planing mill of John G. Hartfelder, on the Savannah, Florida & Western Railway.

Winston, N. C.—The Hotel Fountain.

Building Notes.

Americus, Ga.—P. L. Holt will, it is reported, erect a three-story brick building.

Anniston, Ala.—J. W. Phillips has secured contract for the erection of the Noble Female College, previously mentioned.

Augusta, Ga.—Todd & Ziegler have prepared plans for remodeling a residence for Mrs. A. R. Fleming to cost \$7,000; for remodeling a store for E. R. Schneider to cost \$11,000; for the erection of a block of stores for S. J. Silven to cost \$30,000; for a residence for E. A. Walton to cost \$5,000.

Biltmore, N. C.—R. L. Weeks, of South Carolina, has received contract for the erection of the residence to be erected by George Vanderbilt, previously referred to. It will be 38x180 feet, and cost \$400,000.

Bowie, Texas.—A \$20,000 college is being talked of.

Brunswick, Ga.—Hotel, &c.—The Cumberland Island Co. has been incorporated to build the summer resort on Cumberland Island previously mentioned; capital stock \$165,000. John S. Baxter, T. W. Troy, R. F. Lawton, Armand L. Butts, George W. Duncan and L. P. Hillyer, all of Macon, are the incorporators.

Cardiff, Tenn.—The Cardiff Commercial Club has been organized, and will, it is reported, erect a two-story building. H. M. Lord is president.

Charlotte, N. C.—G. W. Norman has prepared plans for the erection of the city hall previously reported. It will be 86 feet wide and cost about \$40,000.

Chattanooga, Tenn.—Hotel, &c.—The South Tennessee Land Co., lately mentioned, intends erecting a hotel, depot and office building at the new suburb of South Lowell. C. W. Smith, vice-president, can give information.

Chester, S. C.—W. G. Adams, of Rock Hill, confirms the report that he has contract for erecting the town hall.*

Columbia, S. C.—A charter was issued to the Harlin City Alliance Warehouse Co. of Orangeburg county. T. B. Buckhart, R. E. Clark, M. R. Evans and others are among the directors.

Comanche, Texas.—Plans have been accepted for the erection of a \$50,000 courthouse.

Crewe, Va.—The Norfolk & Western Railroad Co. (office, Roanoke) will, it is reported, erect a Y. M. C. Association hall.

Cycloneta, Ga.—Hotel.—J. Lane, general manager Georgia Southern & Florida Railroad Co. (office, Macon), is receiving bids for the erection of a hotel.

Danville, Va.—Hotel.—The erection of another hotel is being talked of.

East Lake, Ala.—A female college is being talked of. Hon. Solomon Palmer, of Birmingham, can give information.

Fort Payne, Ala.—The plans of Chamberlin & Burford, of Knoxville, Tenn., for the erection of the DeKalb county courthouse, lately referred to, have, it is reported, been accepted.

Fort Payne, Ala.—A. H. Gould has prepared plans for the erection of the People's Savings Bank building.

Fort Worth, Texas.—Haggart & Sanguinet have prepared plans for the erection of the Hendricks office building, previously referred to. It is to be 100x95 feet, and will cost \$100,000.

Garrison, Texas.—Hotel.—A hotel will, it is reported, be erected.

Greenville, Miss.—Packer & Murphy have, it is stated, secured contract for the erection of the Farmers' Cotton Warehouse. It will cost \$9,326.

Greenville, Tenn.—Wm. Leming is erecting a market house.*

Greenville, Tenn.—M. P. Reave will erect a tobacco warehouse.

Greer's Depot, S. C.—A branch of the Farmers' Savings, Building & Loan Association of Nashville, Tenn., has been organized with Frank Burgess, president, and J. A. Robinson, secretary.

Gurley, Ala.—Hotel.—It is reported that T. R. Hall is erecting a hotel.

Hampton, Tenn.—Hotel.—The Carriger residence, lately reported, will, it is stated, be converted into a hotel by E. A. Stratton at a cost of about \$25,000.

Hot Springs, Ark.—Hotel.—Sithen & Dow confirm the report previously made that they have contract for the erection of a 100-room addition to be built to the Hotel Eastman.

Johnston, S. C.—The Johnston Warehouse Co. has been incorporated with a capital stock of \$5,000. W. D. Turner, R. A. Turner, W. S. Willis and others are among the incorporators.

Knoxville, Tenn.—Hotel, &c.—The Cherokee Land Co. is laying out a residence addition to Knoxville, and will possibly build a hotel and sanitarium. R. A. McConnell, secretary, can give information.

Lampasas, Texas.—D. G. Price, secretary building committee, will receive proposals until September 2 for the completion of the Baptist church, which will cost about \$6,000.

Landrum, S. C.—Hotel.—It is reported that J. B. Lisle, of Columbia, will erect a hotel.

Louisville, Ky.—The Falls City Market Co. will probably rebuild the market and hall lately burned.

Louisville, Ky.—The Kentucky Distillery Co. will, it is stated, rebuild its warehouse, reported in this issue as burned.

Lynchburg, Va.—Hotel.—Woodruff & Son, of Goldsboro, have, it is stated, received contract for the erection of the hotel previously mentioned as to be built on the property of the West Lynchburg Land Co.

Lynchburg, Va.—The State Farmers' Alliance will, it is stated, shortly consider the establishment of an alliance warehouse company with a capital stock of \$100,000, a State exchange with a capital stock of \$200,000, and a publishing company with a capital stock of \$300,000.

Lynchburg, Va.—Hotel.—A \$100,000 hotel is being talked of. J. Stewart Walker can give information.

Middlesborough, Ky.—Hotel.—A company has been organized by Alexander A. Arthur for the purpose of erecting a hotel; capital stock \$30,000.

Milledgeville, Ga.—T. O. Brown, of Augusta, has received contract for the erection of the Girls' Normal Industrial School, previously mentioned. It will cost \$38,000.

Monroe, La.—W. E. Speer & Co., Washington, D. C., are the lowest bidders for the erection of the United States courthouse and postoffice building lately mentioned, their bid being \$54,912.

Mossy Creek, Tenn.—The Carson-Newman College has commenced erecting the building previously mentioned; cost \$30,000.

Natchez, Miss.—M. T. Lewman & Co., of Jeffersonville, Ind., has secured contract for the erection of the new hotel previously referred to. It will cost about \$85,000.

Newberry, S. C.—The Newberry Cotton-seed Oil Mill & Fertilizer Co. is erecting a warehouse 80x40 feet.

New Castle, Va.—McCartney & Caldwell are, it is reported, erecting a storehouse.

Norfolk, Va.—The Norfolk & Carolina Railroad Co. will, it is reported, erect a warehouse at Pinner's Point.

Ocean City, Md.—The Baltimore & Eastern Shore Railroad Co. (office, Easton) has, it is said, made a proposition to enlarge the Atlantic Hotel.

Orangeburg, S. C.—Hotel.—John W. Fahey will erect a new hotel to cost \$15,000. Todd & Ziegler, of Aiken, are the architects.

Pulaski City, Va.—Hotel.—R. D. Bohannon, of Columbus, Ohio, and S. W. Litchfield, of Abingdon, will open a hotel on the lithia springs property, mentioned elsewhere in this issue.

Quanah, Texas.—The Quanah Hotel Co. has been organized. E. W. Taylor, of Fort Worth;

J. J. Coombs, of Quanah, and G. W. Signor, of Texarkana, are among the incorporators.

Roanoke, Va.—Hotel.—Nicholas & Woodward have, it is said, secured contract for the erection of a new hotel.

Selma, Ala.—Hotel.—P. D. Barker and others will receive proposals until September 1 for the completion of the Broad Street Hotel, previously referred to.

Southport, N. C.—Pyke, Pullman & Weeks have, it is reported, received contract for building the dock and warehouses to be erected by the Cape Fear Coal & Contracting Co.

Sulphur Springs, Texas.—A building and loan association has been organized with a capital stock of \$200,000. P. H. Foscoe is president, and T. F. Gafford, secretary.

Sumter, S. C.—Todd & Ziegler, Augusta, Ga., and Aiken, S. C., have prepared plans for a residence to be erected by H. Harley at a cost of \$10,000; also for a residence to be erected by D. W. Mason at a cost of \$7,000.

Vicksburg, Miss.—The Planters' Cotton Compress Co. is erecting a warehouse 400x100 feet.

Waxahachie, Texas.—The Waxahachie National Bank will, it is reported, erect a three-story building.

Wheeling, W. Va.—Murray Bros. have received contract for the erection of the new jail previously referred to. Their bid was \$69,490.

Whitewright, Texas.—Work has been commenced on the Young Ladies' Home building. It will cost about \$10,000.

Midsummer Activity in the South.

Some idea of the activity that prevails in all industrial lines throughout the South, and of the wide diversity of this development, may be gained from a brief summary of the new enterprises reported in this week's issue of the MANUFACTURERS' RECORD. In Virginia contracts have been practically closed for the investment of \$1,500,000 of English money in Glasgow; at Suffolk a \$300,000 improvement company has been organized; at Staunton a \$50,000 woodworking plant; at Roanoke a \$500,000 iron works; at Danville a \$300,000 improvement company; at Suffolk a \$25,000 electric light company; at Basic City a \$100,000 woodworking factory; at Rockland a \$25,000 flour mill; at Radford a \$150,000 water works and electric company. In Florida there is great activity in phosphate developments, and during the week a \$3,000,000 company, a \$1,000,000 company, a \$250,000 company and a \$200,000 company have been organized to mine phosphate rock and establish fertilizer works; at Fernandina a \$30,000 ice factory is to be built. In Tennessee a \$500,000 cotton mill is to be built, and two rolling mills, one to cost \$100,000; a \$90,000 brewery, a flour mill and \$30,000 powder works. A \$600,000 coal mining company has been organized in Texas, a \$500,000 light and heat company in Louisiana, a \$75,000 electric company in Texas, a \$50,000 lumber company in Arkansas, two lumber companies of \$100,000 and \$42,000 capital respectively in Texas, a \$50,000 granite company in South Carolina, \$300,000 brick works in Washington, \$50,000 brick works in Georgia and \$50,000 brick works in Louisiana, and a \$50,000 shoe manufacturing company in North Carolina. Of smaller enterprises the number is very large, and includes saw mills, ice factories, cotton-seed oil mills and many other enterprises.

With such activity as this in midsummer, when Southern people are closely occupied in getting ready to handle their great cotton crop, and when Northern people are waiting for the return of fall before taking an active part in Southern development, it is difficult to predict what stirring times will be seen later on in the season. In a month the cotton crop will be moving freely and money will be very abundant, and Northern capitalists will by that time be ready to begin their Southward march in great numbers.

1,000 GALLONS of pure Bone Oil for sale. Apply to T. P. Jerman, Jr., Box 325, Raleigh, N. C.

TIMELY HINTS TO BUILDERS.

One-Story Factories and Flat Roofs—Lessening Fire Risks.

The modern system of "slow burning construction" is based upon the principle of consolidating wood material in such a manner that there shall be no concealed spaces in frame, floor or roof. It will then be possible to gain control of a fire in the room in which it starts, as it cannot spread out of the reach of water from room to room, and from attic to cellar.

The immense annual destruction of property by fire has demonstrated the necessity of building our houses and factories on some other plan than the bonfire system. The result of inquiry and experiment as embodied in this article is largely derived from facts gathered by Mr. Edward Atkinson and Mr. C. J. H. Woodbury.

The worst feature of combustible architecture is the factory roof. Not only does it fail in its primary object, "the keeping out of the rain," but it is so thinly built that it offers no protection to the heat of summer, and is no barrier during the winter months to the heat diffused from the burning fuel within the building.

Defects in construction led the Mutual Factory Insurance Companies to suggest that the best kind of roof for factory buildings would be one built of solid material—like the floors, and nearly as flat, with a pitch of only half an inch to a foot. Such a roof could be utilized as a floor upon which work requiring the open air could be conveniently and successfully carried on.

The flat roof is described as "a simple deck constructed of three-inch plank grooved and splined, placed on timbers set from eight to eleven feet apart on centers, sheathed underneath between the timbers if the owner desires a fine finish, and covered on the outside with any of the customary materials, the ends of the timbers sometimes projecting outside the walls, and the deck carried far enough over to form a suitable covering, according to the height and character of the building, or else the finish may consist of a brick cornice without gutters, the drainage being below."

As hollow cornices and wooden gutters are needless and dangerous, they ought to be discarded.

In the early days of textile factories, when machinery was moved by water-power, large factories were established on the banks of streams and below the falls of rivers in narrow valleys. It was therefore necessary, on the ground of economy, that they should be built several stories in height.

When factories were built in the cities, where land was valuable, the same plan of construction prevailed, and very narrow and very high buildings were the rule.

Soon water-power was displaced by steam, and rapid transit and cheap railway service made it possible to build factories in the open country. But no one seemed to have thought that with the changed conditions high factories were no longer a necessity, and that one-story buildings, provided they were erected on cheap level land, were more economical in cost of floor area, supervision of moving stock in process of manufacture and repairs to machinery than buildings of greater height.

One blemish, which was very noticeable in the construction of early textile factories, was the broad extent of blank wall, unbroken save by small apertures, mere apologies for windows. It never occurred to architects and builders to reverse the arrangement, and let broad spaces of wall and narrow windows give place to narrow spaces of wall between windows that were wide and carried up to the ceiling, so that light should be uniformly diffused throughout the room. If the light was too bright

it could be softened by painting the inside of the windows with a mixture of turpentine and zinc white.

In mills of one story, where more light is required than is afforded by the windows, monitors or hipped skylights should be placed in the roof. These monitors, which are preferable to sloping skylights, which transmit heat, should be provided with double windows or with two thicknesses of glass in each sash that no moisture may condense on inside of the windows. If hipped skylights are used it is sometimes necessary to separate them from the room below by glazed sashes level with the ceiling.

When the insurance companies realized the danger from high buildings, as compared with those that are low and wide, they informed their members, who were about to build mills operated by steam-power in the country, that it would cost less per square foot of floor to build a mill two or three stories high than one many stories high, and, also, that a one-story mill, provided it could extend over a large area of ground, could be constructed at as low a price per square foot of floor as the mill several stories in height, and would be as cool in summer and as warm in winter as the other, while it would be much better ventilated.

These suggestions were acted upon, and now it is no unusual sight to see, in many parts of New England, the one-story factory—covered with a three-inch plank roof, sometimes thinly boarded and protected by tin, gravel or a preparation of cotton duck—extending over three quarters of an acre to an acre and a-half of ground.

The floors are made of plank, 3 inches to 5 inches thick, according as the beams upon which they rest are distant from each other 8 to 12 feet.

Resistance to fire is increased by covering the floor planks with a coat of plaster; sometimes asbestos paper is added.

If the planks are sheathed on the under side the plaster may be laid on wire lathing and placed upon the sheathing between the timbers and around the timbers, care being taken that they are well seasoned, lest the sap cause dry rot.

The beams are usually made of Southern pine, and are supported on timber columns, unless the weight the columns will be required to sustain is greater than they can bear, in which case iron columns, protected by wire and plaster, should be substituted for them. Timber columns should always be square instead of round, so as to offer greater resistance to pressure.

In order to avoid danger and to give stability to a building from the vibrations of heavy machinery, it is sometimes necessary to lay the floor timbers directly on the ground, interposing a layer of concrete or stones to prevent dampness.

The stairways should be built in brick or stone towers outside the building or in one corner of it; but there should be no communication with the different floors, except through the medium of fire-proof doors made of matched boards two inches thick, and covered with tin rather than with iron, which is not proof against fire. The stairway should run straight, with square turns instead of round ones.

It is said that a mill three to five stories in height can be built in New England, according to the plans of "slow burning construction," at a cost, above the foundation, of 60 to 75 cents per square foot of floor, not counting in the basement unless it is high and used in the same way that the other floors are. The position of the mill and the style of interior finish affect the cost. If the ground is level and no extra expense is incurred in setting the foundation, a one-story mill can be built at about the same rate per square foot of floor as the mill of five stories.

Some one-story mills are built more sim-

ply, with lighter framework. In that case the cost is often less—only 50 cents per square foot of floor.

The walls of buildings one or two stories in height are made of plank like the floor, and are put together in a similar manner. There should be no sheathing or furring in any part of the building, and as few projections of timber as possible, as they catch fire much quicker than plain surfaces.

Those factories which are examples of "slow burning construction" are much less liable to destruction by fire, though they are not fire-proof, than buildings made of brick, iron or stone. It would be impossible to build a factory which should be fire-proof, since it would have to be made of indestructible material and be capable of resisting the burning of its contents without any damage to itself.

Iron will burn when exposed to a fierce fire, granite crumbles to sand, but heavy timbers resist the flames and burn very slowly. Since wood enters very largely into the construction of buildings in this country, it is very fortunate that our forests are filled with timber, so that we have a larger proportion of that building material than of any other.

As soon as architects, builders and owners of manufacturing property become convinced that factories built in accordance with the methods of "slow burning construction" are better arranged as to stability, light and application of power, and cost much less than those factories which are examples of "combustible architecture," they will be likely to transfer their allegiance to the modern system. But it takes a long time to effect a radical change in opinions and theories in regard to styles of architecture, and in the interval it would be well to remodel the old factories and introduce the best features of "slow burning construction." Then their power of resistance will be increased and the fire loss will be materially reduced. If, after all the improvements have been made, a constant and efficient supervision be maintained over the factory, the fire will have little opportunity to work its will upon the building or its contents. Such supervision would have reference not only to the inspection of the building and the detection and removal of hidden or apparent causes of fire, but also to the proper care and use of the fire apparatus.

An inspection of the factory should be made at least once a week by two men, overseers of rooms or foremen, who are appointed to their duties for a month, each term of service to expire at the end of alternate fortnights. An accurate report of the condition of the rooms, machinery and apparatus should be registered on a clock in a manner similar to a roll-call.

To avoid all possible danger, raw material ought never to be stored in the same building with the material that is in process of manufacture. Waste material, as well as substances like lime and powdered zinc, which ignite when wet, ought to be carefully watched and kept in a safe place.

Well-ventilated, tightly-covered iron tanks for petroleum oil should be placed out of doors and banked around with earth or sunk in the ground below the point of consumption, so that no harm would be done in case of a break.

Steam pipes ought never to be wrapped about with non-conducting substances, which ignite when heated at the high temperature to which they are subjected.

Bituminous coal should never be stored under valuable buildings nor in contact with timber, as it is liable to ignite instantly.

The coal sheds should be thoroughly swept before a supply of coal is taken in, and if it is over eight feet in depth an iron rod should be thrust to the bottom every day. By that means any heat in the coal would be communicated to the rod and so discovered before any serious accident could occur.

If to the exercise of these precautions is added skill in the use of the fire apparatus much property will be protected from loss by fire. To this end the employees should be organized into bands of firemen for practice, at least twice a month. They would then be competent to render efficient service in time of need. We hope that day is far distant, and that terrible conflagrations will no longer be the rule, but the exception. In the modern system of "slow burning construction" there is safety.—Philadelphia Record.

Protected and Unprotected Industries.

Writing of the new steel works which are just being commenced at Tredegar, Ala., the MANUFACTURERS' RECORD states that they are designed to turn out 300 tons of finished rails, angles, bars and cotton ties daily, and will give steady employment to over 3,000 men. These, with their families, and the doctors, lawyers, storekeepers, with those in such trades as are required where any population is gathered together—shoemakers, tailors, blacksmiths, &c.—will give a population of at least 15,000, and all of these, so far as their support is, either directly or indirectly, dependent on those employed in the steel mill, will derive their support from protection. There can be no doubt on this point.

It is mentioned that about 18,000,000 bricks will be used in building the mill. In addition to this the inhabitants will require some 3,000 buildings, residences, stores, &c. As has been pointed out, the stone and brick masons, the carpenters and plumbers, who construct and fit up these buildings are entirely without protection, and they receive more wages than many employed in protected industries. But the palace of the millionaire and the shack of the brute who is too lazy to work are alike devoid of protection; and the 20 miles or more of streets and roads are also, with the laborers, who grade, regulate, sewer and pave them, unprotected. There is no line or word in the McKinley bill imposing a duty of even a single cent on either the paved and sewered street of the rich nor on the blazed trail of the rugged pioneer; yet a report on immigration of some 200 pages was issued by the last administration to prove that this country was more attractive to unskilled labor than to expert workmen.

We are urged by such considerations as the above to believe that the building of great mills and the houses of those dependent on them for employment and incidental support, the opening of streets and roads and the building of railroads, have no influence on the wages and employment of those whose business it is to construct them.

Work, as at Tredegar, both the construction of the mill and town and the output of manufactured goods, is in the center of the country where those engaged in it will be more apt to draw their supplies from American sources than if situated on the sea coast, and will also furnish the manufactured products to the largest number of consumers with the least expense for transportation. Free traders like Senator Vance, who wished to reduce the duty on pig iron and make cotton ties free, would transfer the industry to be inaugurated at Tredegar to England, where the food supplies originating in America would amount to less than \$4.50 per capita. Others, like Senator Gorman, would concentrate our iron making east of the Alleghenies by reducing the duty on iron ores. The concentration of industries, as well as of wealth, is an English idea, but it does not work here. Though steel ships have been built but little over five years on the Northwestern lakes, five of eight States fronting on them have steel ship-building yards, and it is probable that within five years after our two shipping bills have passed there will be steel ship-building yards on 14 or 15 of the 22 States which front on the two oceans and the Gulf. When our legislature puts an industry on its feet the advantages are widely distributed, and by no means limited to that industry only.—American Economist.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Artesian Well.—J. A. Russell, mayor, Alvarado, Texas, wants bids for sinking an artesian well.

Boiler, etc.—M. Moore, Danville, Va., wants a boiler and pipe for steam heating.

Boiler and Engine.—The Owensboro Brick & Tile Co., Owensboro, Ky., will purchase a 75 horse power steel boiler and 60 horse power engine.

Brick and Tile Works.—The Owensboro Brick & Tile Co., Owensboro, Ky., will purchase machinery, including kilns for brick and tile works.

Broom Factory.—F. H. Bain, Goldsborough, N. C., wants prices on machinery for making brooms.

Cement Works.—The Luttrell Town Co., Luttrell, Tenn., will want machinery for cement works.

Crusher and Engine.—The Roanoke Building Stone & Pavement Co., Roanoke, Va., wants a stone crusher and an engine.

Dredge or Pump.—J. C. Hougland, Jewell, Fla., desires information, prices, etc., on a dredge or pump suitable for raising muck out of water from 1½ to 4 feet deep and placing on scow.

Dynamo.—The Anderson Hotel Co., Anderson, S. C., wants a 200-light incandescent dynamo.

Dynamos, etc.—G. L. Hogun & Co., Winchester, Tenn., want a second-hand 500-light alternating dynamo and 150-light direct current dynamo, also 12 second-hand arc lamps.

Electric Lighting.—Frank R. McGeoy, Memphis, Tenn., wants prices on electric-lighting fixtures, etc.

Elevators.—Frank R. McGeoy, Memphis, Tenn., wants elevators, dumb waiters, etc.

Excelsior Machinery.—Rounsaville & Bro., Rome, Ga., want excelsior machinery.

Excelsior Machinery.—J. A. Rudolph, Rome, Ga., wants catalogues and prices on excelsior machinery.

Furniture Factory.—Eugene H. Wilkes, Laurens, S. C., wants prices on machinery for a furniture factory.

Ginnery, etc.—T. H. Burriss, Anderson, S. C., wants complete outfit for a cotton ginnery, including 6 to 10 horse-power engine.

Heaters.—City authorities, Chester, S. C., will purchase heaters for its town building.

Hot Water Apparatus.—L. B. Wheeler, architect, Memphis, Tenn., wants prices on hot water heating plant for seven-story building.

Hot Water Heating.—F. R. McGeoy, Memphis, Tenn., wants hot water heating apparatus for infirmary.

Hydrants and Water Gates.—The Board of Public Works and Affairs, Nashville, Tenn., will receive bids until September 3 for furnishing f. o. b. at Nashville 40 single outlet fire hydrants and 26-inch water gates.

Ice Machine.—Dorsey, Turner & Campbell, Front Royal, Va., want the address of manufacturers of ice machinery.

Iron Front.—Joe Smith, Jr., Dalton, Ga., wants prices on cast iron store front 60 feet long, 12 feet high, 6 columns, with 60-feet lintels.

Lead and Pipe.—The Board of Public Works and Affairs, Nashville, Tenn., will receive bids until September 2 for furnishing f. o. b. at Nashville 7½ tons of soft pig lead and about 247 tons of 6-inch water pipe.

Marble Mill.—The Piedmont Marble Co., Marble Hill, Ga., wants machinery for a marble mill.

Planing Mill.—Marable & McCurdy, Bedford City, Va., want first-class machinery for a planing mill.

Plating Machine.—"F. & D." Drawer 548, Baltimore, Md., want information about a machine for plating rope.

Press, etc.—T. H. Burriss, Anderson, S. C., wants a complete newspaper printing outfit.

Printing Press, etc.—S. P. Epes, Blackstone, Va., wants a printing press and complete newspaper outfit.

Pump.—The Selma Electric Light & Gas Co., Selma, Ala., wants a steam pump, No. 5 Cameron preferred.

Pump, Wind-mill, &c.—T. H. Burriss, Anderson, S. C., wants prices on a force pump or wind-mill and ram and engine fixtures.

Rails, etc.—The South Heights Rapid Transit Street Railway Co., San Antonio, Texas, wants

prices for 60 days delivery on 35-pound rails and trimmings for a railroad 2½ miles in length.

Sash, Door and Blind Factory.—Marable & McCurdy, Bedford City, Va., want machinery for a sash, door and blind factory.

Saws.—W. C. Pipkin, Hatchie, Tenn., wants prices on two circular saws, one 60 and the other 30 inches in diameter.

Steam Heating Apparatus.—George Stephenson & Co., Grayson, Ky., will probably want steam heating apparatus.

Stripping and Braiding.—Mrs. S. Saper, St. Andrew's Bay, Fla., wants machinery for stripping palmetto, also machine for braiding hats.

Water Works.—G. L. Hogun & Co., Winchester, Tenn., want prices on a 250,000-gallon pump, hydrants, etc., an electric pump of 50,000 gallons daily capacity on 100-foot raise and a water tank to hold 25,000 gallons.

Water Works.—The Domestic Water Works Co., Louisville, Ky., wants machinery entering into the construction of water works, including pumps, pipes, tanks, etc.

Well-drilling Machinery.—The Titus Machine & Tool Co., San Antonio, Texas, will want machinery for sinking salt wells.

Wind Mill.—I. H. Saunders, Danville, Va., wants a wind mill to pump water.

Wire.—The Selma Electric Light & Gas Co., Selma, Ala., will purchase wire from No. 4 to 12.

Woodworking Factory.—E. G. Willingham, Chattanooga, Tenn., wants machinery for manufacturing insulator pins and brackets.

Georgia Pine vs. Teak.

Mr. Courtenay De Kalb, a mining engineer who has lately had occasion to ascend the Amazon some 3,000 miles to the head of steamboat navigation in Eastern Peru, refers, in a communication to the Nation, to the steamboat which carried him from Iquitos to Yurimaguas, at the head of navigation on the Huallaga, in terms that will be a surprise to many who have been taught to believe that teak was the most durable of the woods available for construction. He says:

"This venerable craft possesses a history in which Americans may justly take a patriotic pride. She was built in Philadelphia for the 'Companhia do Para e Amazonas,' now defunct, and, under a succession of different owners, has been in active service in this most trying of climates for 23 years. The same timber is in her to-day as when she was first built, and she is in as good condition as any vessel of English make which has been in the valley of the Amazon as long as seven years. The assertion is often heard in tropical countries that none but the English can construct vessels which will hold together under the severe tests to which the heat and moisture of such climates subject them. One reason assigned for this is that they employ teak, an East Indian wood unobtainable by Americans; but in the face of all this exists the fact that the oldest boat on the Amazon was built in the United States, and that, with the exception of her iron hull, the material used in her construction was none other than Georgia pine (*Pinus palustris*, known in various sections of the country as yellow, hard, or long-leaved pine), which, by reason of being so heavily charged with pitch, has been found to last three times as long as teak."

This is a very important and interesting fact, for there is probably no more trying climate in the world than that of the Amazon, and our Georgia pine can be furnished at much less cost than teak in all countries, unless it is India, and probably could compete in price with it on the seashore of that country in quantities large enough to freight a vessel. The better workmanship, in addition to the excellence of the material used, we habitually put into our steamboats as well as cars, particularly for what in England are called "colonial orders," doubtless accounts in part for the long life of the *Majin*.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year or six months for \$2.00.

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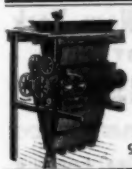
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PROPOSALS.

NOTICE TO CONTRACTORS.—Sealed bids will be received by the Board of Water Commissioners of Gainesville, Ga., for the construction of a complete system of water works for said city. The work will include the construction of a supply well, standpipe, the furnishing of engines, boilers, pumps, pipes and all other necessary appliances to complete a first-class system of water works. Plans and specifications may be seen in the Council Chamber of the city. All bids will be opened and the contract awarded on the 26th day of August, 1900, at 12 o'clock noon. The right is reserved to accept or reject any or all bids. Bids may be made for the whole water works complete or for any given part or class of the work. Address all bids and other communications to B. P. CHAMBERS, Clerk Water Commission, Gainesville, Ga.

NOTICE TO WATER SUPPLY COMPANIES.—Bids for the above-specified materials, i. e. b. cars, Gainesville, Ga., will be received by the undersigned, J. G. LONGSTREET, Civil Engineer for Local Construction Company, bidders. CLARK, BELL & CO., Purchasing Agents for Local Construction Company, bidders.

PROPOSALS WANTED.—Up to 12 o'clock August 30, 1900, proposals will be received for the erection of a new Courthouse in Spartanburg City, South Carolina. Proposals will be sealed and directed to Joseph M. Elford, county commissioners clerk, Spartanburg, South Carolina, marked Proposal for New Courthouse. Proposals will be for the furnishing of materials, except as modified herein and building the entire structure complete, according to plans and specifications. The right is reserved to reject any or all proposals and to waive formalities. The successful bidder will be required to give bond to the full amount of the contract, and to enter upon the work immediately after the perfection of contract, bond, &c. Payments will be made in cash as follows: 50 per cent. of the value of the work done and put in place in the building in an acceptable manner, as the work proceeds. Plans and specifications can be seen and all necessary information can be had at the office of the clerk of the county commissioners, Spartanburg, S. C., or McDonald & Bros., architects, Louisville, Kentucky. All information, or work, or materials indicated by the drawings and not shown in the specification or vice versa, will be performed as fully as if laid down in both. Should any parts of the drawings and specifications conflict with other parts, contractor shall make report to the architect, and get instructions as how to proceed. Each contractor is expected to read over the entire specifications; this also applies to subcontractors. By order of the Board of County Commissioners, held at Spartanburg July 26th, 1900. CHAS. A. BARRY, Chairman of Board.

Attest: JOSEPH M. ELFORD, Clerk of County Com'rs, Spartanburg, S. C.

NOTICE TO CONTRACTORS.—Sealed proposals will be received by the Commission appointed for the purpose by the County Court of Monongalia County, West Virginia, at the office of the Clerk of the Circuit Court, in Morgantown, in said county, until 12 o'clock noon of Monday, September 1, 1900, for the labor and material and the construction and completion of a Courthouse at Morgantown, West Virginia, in accordance with the drawings and specifications furnished by John C. Fulton, Architect, copies of which may be seen at this office after the 5th day of August, 1900. 1st. All bids must be made upon the printed forms to be obtained from this office in a sealed envelope, directed to the undersigned and marked "Proposals for Courthouse at Morgantown, W. Va." 2d. An evidence of good faith every proposal shall be accompanied by cash or certified check to the amount of three hundred dollars (\$300), made payable to the County Court of Monongalia County, in case the successful bidder shall fail for ten days after an award to execute the required contract and bond for the faithful performance of the terms of the contract. The checks of unsuccessful bidders will be returned to them immediately after the contract is awarded or all bids rejected. 3d. The right is reserved to reject any and all bids. 4th. Bidders are requested to be present at the opening of proposals. Morgantown, on the Monongalia river, may be reached by B. & O. R. R. or from Pittsburgh by daily line of steamboats. R. E. FAST, Secretary of Commissioners.

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TRADE NOTES.

THE Salem Foundry & Machine Shop, of Salem, Mass., manufacturers of freight elevators, are meeting with much success with their automatic locking safety gates for elevator openings. Among their recent sales may be noted the following: Pacific Mills, Lawrence, 29; Everett Mills, Lawrence, 5; Springfield Provision Co., Springfield, 15; Lyman Mills, Holyoke, 3; Overman Wheel Co., Chicopee Falls, 3; Spartan Mills, Spartansburg, S. C., 8; Lynchburg Cotton Mills, Lynchburg, Va., 4; Sewall & Day Cordage Co., Boston, 9; Chelsea Jute Mills, Brooklyn, N. Y., 10; Salem Building Association, Salem, 8, and many others.

THE electric apparatus of the Knoxville Street Railway Co., Knoxville, Tenn., comprises eight Thomson-Houston railway generators and the usual appliances for their operation. Each generator, as is the same with the engines, is arranged so as to be thrown in or out of action without interfering in the least with the operation of the remainder of the plant. The engines, boilers and piping were furnished by C. & G. Cooper, of Mt. Vernon, Ohio, and the counter-shafting by the Holyoke Machine Co., of Worcester, Mass. The plant is rapidly nearing completion, and will be in operation some time this month. The electric railway for which this plant is designed is 3.40 miles in length, and will operate five motor cars.

THE Ingersoll-Sergeant Rock Drill Co., of New York, has just received an order from the contractors engaged in removing the iron gates of the Danube for a large plant of submarine drilling apparatus. Mr. Bessier, a German engineer, recently visited this country in the interests of the work on the Danube. He investigated thoroughly our American methods, and decided to adopt them as the best for the purpose. The work extends for twenty miles along the Danube river, and will cost about \$5,000,000. The removal of these obstructions has been attempted many times, one of the Roman emperors having made an effort to remove the rock. Recently an Austrian empress made a similar attempt, but without success. There is every reason to believe that American machinery will do the work economically and well.

THE Greenwood automatic railroad signal is a new invention, the result of long investigation on the part of Mr. George D. Greenwood and John G. Jory, of Baltimore. This signal consists of a simple mechanism placed alongside the track, so arranged as to be perfectly protected from the weather, whereby, through the pressure applied to the lever by an approaching train or locomotive, the mechanism is brought into action, and through the medium of compressed air semaphores or targets at either end of any space, to be determined when signal is put in, are put in operation, indicating the presence of the train. When the train passes out of that space the semaphore returns to its former position by the pressure of another lever at the opposite end of the space. There being no cables and everything being operated by compressed air, no fear need be exercised concerning contraction or expansion.

CHANGE IN AN OLD FIRM.—The business of the old and well-known firm of New York Central Iron Works (W. B. Dunning, proprietor) has grown to such proportions that it has been thought best to form a stock company, with Mr. Dunning still at the helm. This is the steam heating boiler concern which has the unprecedented record of the sale of over 15,000 steam and hot water boilers for heating dwellings, stores, churches, public buildings, etc. The fol-

lowing card from Mr. Dunning has been sent out:

GENEVA, N. Y., July 3, 1890.

Dear Sir—Please take notice that I have this day organized my business into a stock company, incorporated under the name and style of New York Central Iron Works Co. I have retained an interest in the business, and at a meeting of the board of directors was elected president. The company has increased facilities for turning out work promptly, and my old customers who have patronized me so liberally for the past 40 years can rest assured that their interests will be promoted by the change. With thanks for past favors and hoping that the Dunning steam and hot water boilers will increase in favor as they are more widely known, I remain very truly yours,

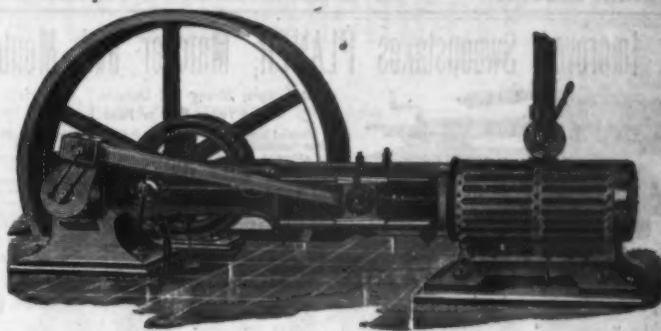
WM. B. DUNNING.

We have received a copy of Poor's Manual of Railroads for 1890, which is the 23d annual number of that well-known work. Messrs. H. V. & H. W. Poor, the publishers, 70 Wall street, New York, announce that they are ready to supply all orders. The price of this volume is \$6.00 per c. py. The manual this year not only maintains the high standard of excellence which has been the leading cause of its well-earned reputation, but, in addition, presents to the public perhaps the most valuable feature which its publishers have introduced in recent years. This feature is the introduction of special maps of the leading railways of the country. The maps are 51 in number, and embrace the most important systems in the United States. They have evidently been prepared with the greatest care, and as an aid to investors and to persons desiring to study the systems separately without being obliged to trace them out on an ordinary map, they are invaluable. The elaboration of detail in the presentation of railroad companies' statements, which has ever been a characteristic feature of the manual, is still continued on a scale no less minute. The special features, such as the excellent series of historical monographs of the leading railroad corporations and the comprehensive tabular statements of bond obligations, their security, trustees, etc., are continued and extended. One may very pertinently ask: How many of the holders of securities in the great systems are perfectly familiar with the financial condition of that line or of the ramifications of that company's road? The statements in this manual will prove of great benefit to those of the former kind, as will the excellently executed maps help those in the latter class. It is to be hoped that Messrs. Poor will, in the next number of the manual, present similar maps of every important line in the country.

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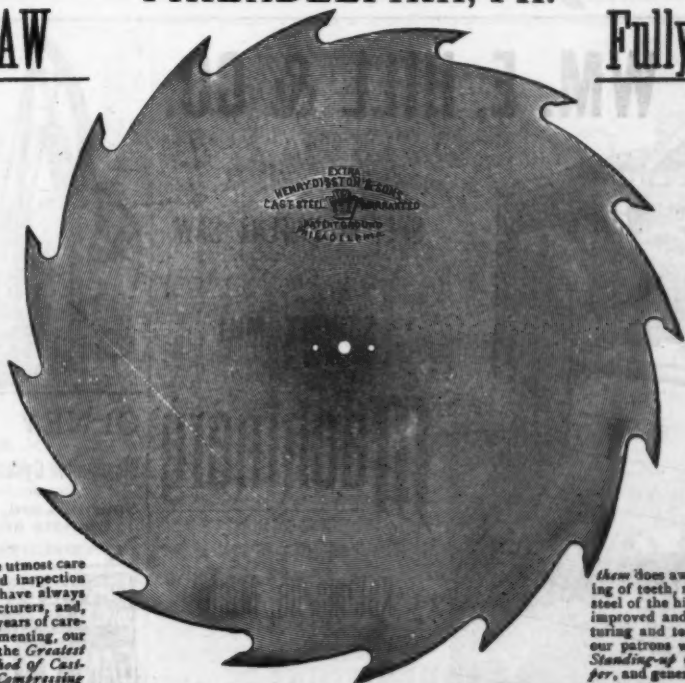
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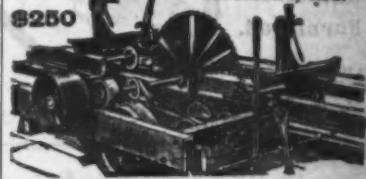
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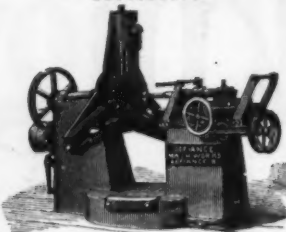
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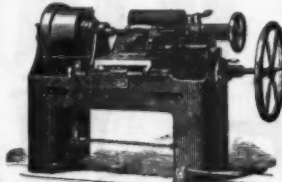
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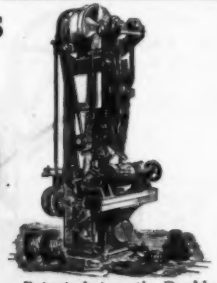
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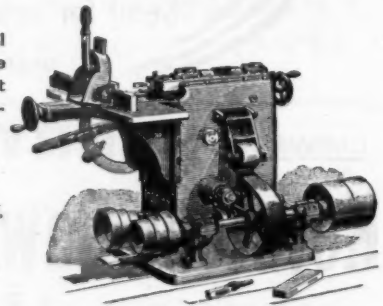
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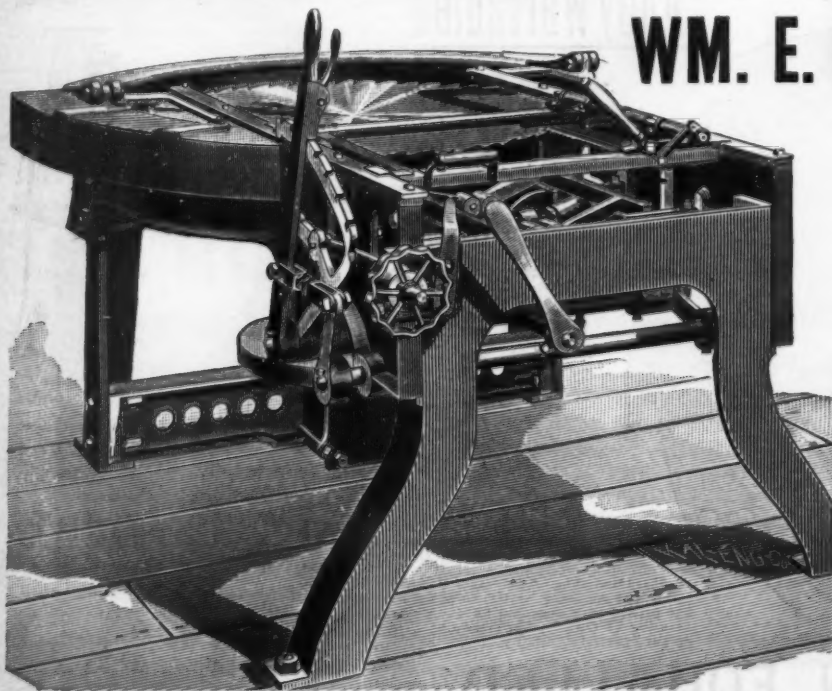
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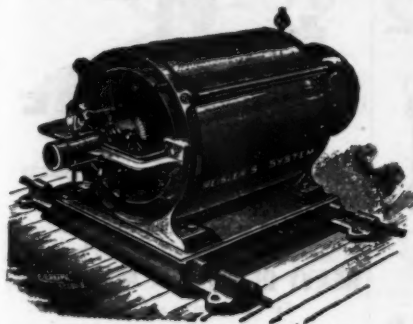
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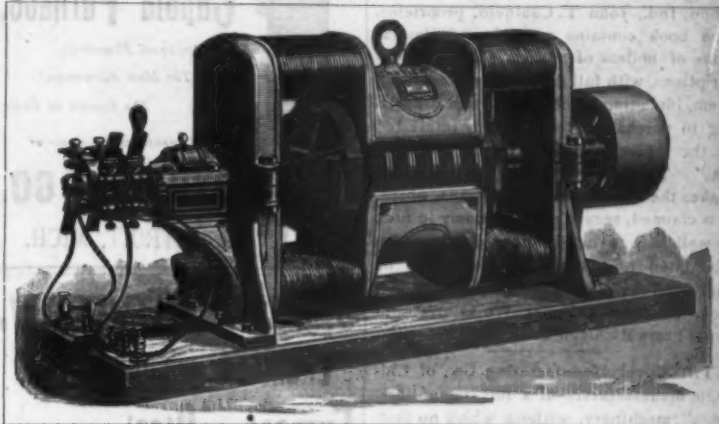
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MANUFACTURER OF

Dynamos and **L**amps for **E**lectric **A**rc **L**ighting

For Central Stations and Isolated Plants.

70,000 Arc Lamps in Daily Operation.

Fifty-two per cent. of all the Arc Lamps used by Gas Companies, and twenty-five per cent. of the entire number used in the United States are of **THOMSON-HOUSTON MANUFACTURE**. What better proof than this could be offered of the merits of the system.

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620 Atlantic Avenue, BOSTON, MASS.

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TRADE NOTES.

THE Eclipse Wind Engine Co., Beloit, Wis., announce that, owing to the rapid growth of their friction clutch business, a separate department has been organized to be known as the Eclipse Clutch Works, and all correspondence or bills should be corrected accordingly. This new department deals in everything pertaining to the friction clutch and power transmission.

AN interesting catalogue known as catalogue "A," treating of boilers, is issued by the Fulton Steam Boiler Works, Richmond, Ind., John T. Caulfield, proprietor. The book contains a number of illustrations of boilers of various sizes and descriptions, with full explanations regarding them, including price-lists. Parties desiring to purchase, or in any way interested in the subject, should write for catalogue "A." The Fulton Boiler Works also makes the Reliance water columns, which, it is claimed, secure great economy in fuel, as well as a saving in other matters. An illustrated price-list of this will also be sent upon application. All the goods sent from the Fulton Boiler Works are sold f. o. b. cars Richmond, Ind.

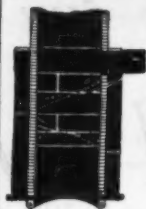
THE Covel Manufacturing Co., of Chicago, manufacturers of a full line of "file-room" machinery, without which no first-class saw mill is well equipped, are receiving no end of testimonials from their highly-pleased patrons from every part of the country. The following is a sample letter:

SULPHUR, TEXAS, Dec. 4, 1889.

To the Covel Manufacturing Co.:

Gentlemen—I have used your saw sharpener and the improved Kinney swage during the past three years, both at Muskegon, Mich., and Minneapolis, Minn., and can safely say that they are the most reliable machines for perfect saw filing that are on the market to-day. As to the durability of the machines, if kept cleaned and properly oiled, they will last for years. I have run one of your improved machines at Hall & Ducey's two seasons without expending one hour's time in repairing. We have two machines here at the Sulphur Lumber Co.'s mills for saw grinding and two of the improved Kinney swages, all in good working order, and everybody is well pleased with the work they are doing. L. B. VARNEY.

THE Cosmopolitan for August is unusually replete with interesting matter. Among the articles included in that number are "National Guard Camps of Instruction and Their Faults," by Wm. R. Hamilton, U. S. A.; "Milton," a poem, by Inigo Deane; a continuance of Miss Elizabeth Wisland's account of her trip around the world. The illustrations in the latter article, as well as in the others, are very interesting. "Public Baths for the Poor," by John Brisbane Walker, and "Co-operative Public Laundries," by Arthur B. Turnure, are two very instructive papers, as is also "The World's First Great Ship Railway," by Charles G. D. Roberts, M. A. F. R. S. C. Though the guilds of Europe have been written about so frequently it is shown that the subject had not been exhausted, as "Old Guilds of Flanders," by Herbert Pierson, holds the attention of the reader throughout. "Hypnotism—the Weird Art," by Prof. Donato; "Why the Bishop Left Rye Beach," a story by Oscar Fay Adams; "The Waning Glories of Versailles," by Edward King; Hollister's Wife," a story by Frances Boardman; "My First Walrus Hunt," by Frederick Schwatka; "Ferdinand to Miranda," a poem, by Richard Henry Stoddard, with several other poems, are also found in the August Cosmopolitan. Four articles—"Two Stories of the Desert," by David Ker; "Historic Illustrations of the Confederacy," by Murat Halstead; "Social Problems," by Edward Everett Hale, and "In the Library," by the Marquise Clara Lanza, complete the contents.



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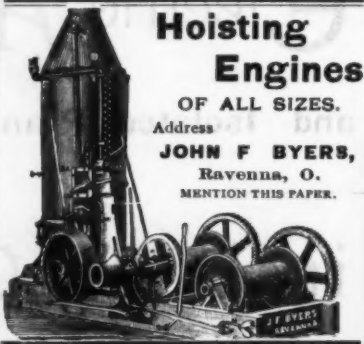
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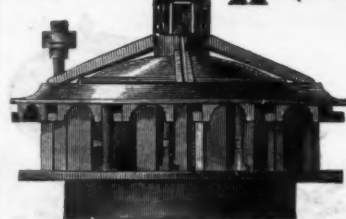
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It is also far more compact, taking up less room than any other make, and will hold the load at any point.

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Every hoist warranted.

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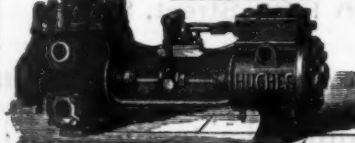
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This is a revolving Derrick which makes a perfect circuit from either right or left. It can be worked from a lighter or Steamer same as on solid ground. It is adapted for the hoisting of stone, iron ore, coal or any material, and can be used with or without the bucket. Capacity in one lift ranges from one to five tons. Further particulars on application to

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On the main lines of the Norfolk & Western, Seaboard & Roanoke, Atlantic & Danville, Norfolk & Carolina, Suffolk & Carolina and the Suffolk Lumber Company's Railroad. The county seat of Nansemond, on the Nansemond river, 16 miles from Hampton Roads and 20 miles from Norfolk. Has three lines of steamers to Norfolk and Baltimore.

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IRON ORE.

Brown Hematite Ore inexhaustible in quantity and excellent in quality.

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In close proximity and abundant.

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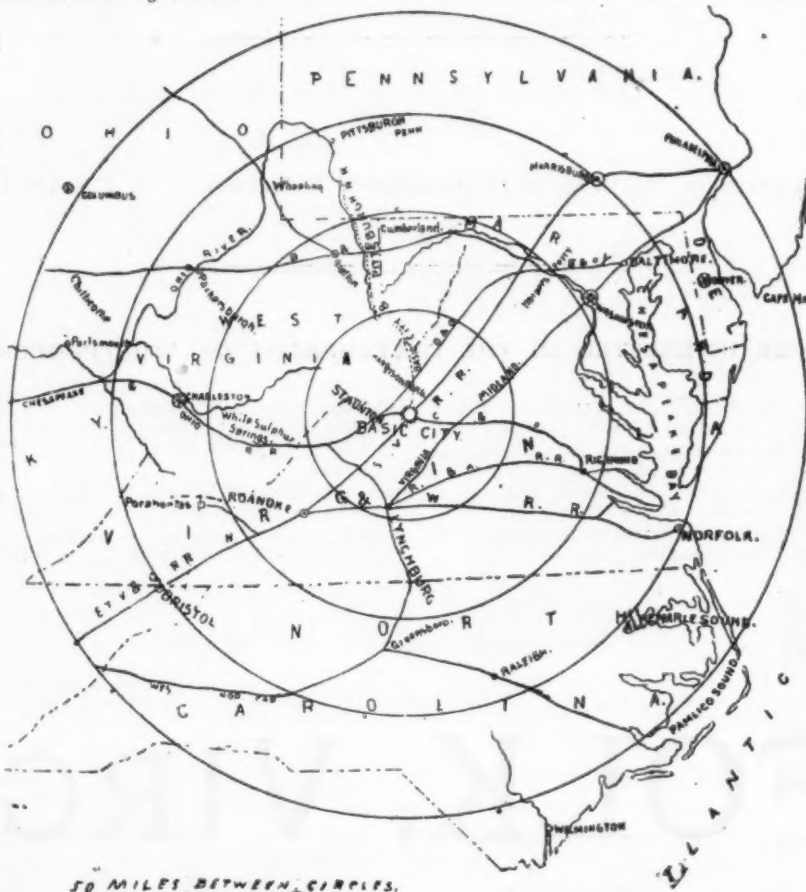
Pure free-stone. The South branch of the Shenandoah River flows through the property. A magnificent Lithia Spring and other medicinal waters.

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Surrounding and tributary equal to any in the Shenandoah Valley in beauty, fertility and productiveness.

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Of almost every variety and plentiful.



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Already secured a 100-ton Iron Furnace, Car Works, Paper Mill, Hardware Factory, two Blind, Sash and Building Material Factories, two Brick and Tile Factories, and others are being negotiated for. A large and handsome Hotel in course of construction, 259 feet long, with 85 rooms. The industries will employ at least 900 workmen.

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As a distributing point and as a favorable situation for manufacturers, Harriman is not equalled by any new city in the South, and is excelled by no old city. Harriman is being built by the

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The property is within five minutes' walk of the N. & W. R. R. depot. It is intersected by broad, oak-shaded avenues, and divided into building lots averaging ninety feet front by 230 feet deep. A superb view of the beautiful Peaks of Otte visible from every part of the property. Prices range from \$6 to \$12 per front foot, according to location, &c.

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R. KENNA CAMPBELL, Gen. Manager

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Traversing a Magnificent and Even
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The rice and sugar plantations and great massive sugar houses and refineries south of Baton Rouge are especially interesting, and never fail to please the observant passenger.

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The equipment and physical condition of the line are first-class in every particular, permitting a high rate of speed and insuring the comfort and safety of passengers.

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Passengers should purchase tickets via this line, it is emphatically the most attractive route in the South to-day.

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The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills, muck bar mills, nail works, glass works, cotton or woolen mills, and tanneries, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; pig iron from the furnaces at Lynchburg (2), Roanoke (2 in operation and 1 now under construction), Pulaski (1), Ivanhoe (1), Radford (1, to be built in 1890), Salem, Graham Max Meadows and Bristol (1 at each point now under construction), bar iron from the rolling mills at Roanoke, Lynchburg and Richlands (1 to be built in 1890); coke and semi-bituminous coal from the Pocahontas Flat Top field; superior gas coals from the mines on the Clinch Valley Extension; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and South-western States and Territories at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development of iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. Pope, General Freight Agent, Roanoke, Va., or to

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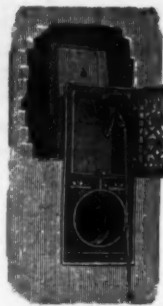
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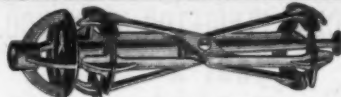


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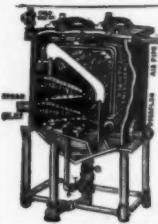
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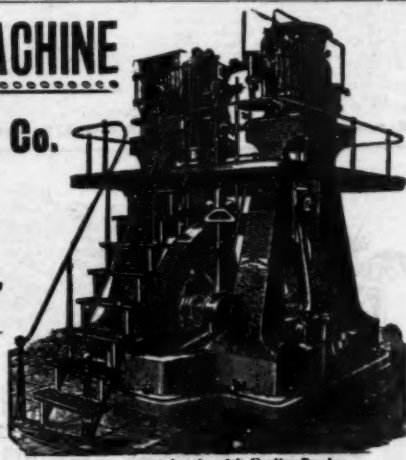
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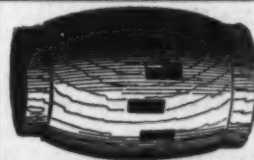
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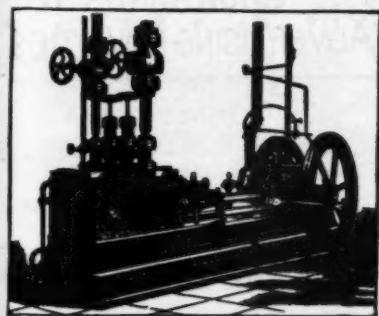
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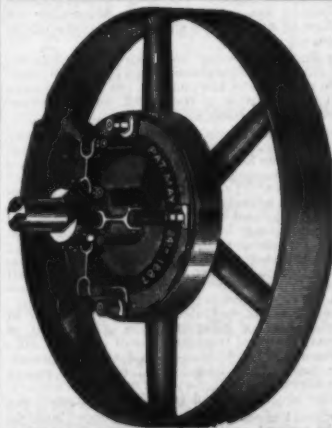
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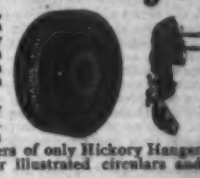
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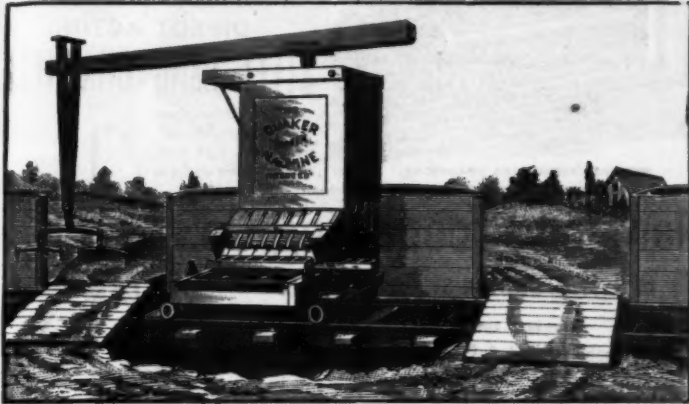
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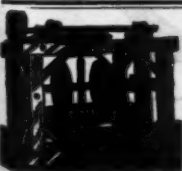
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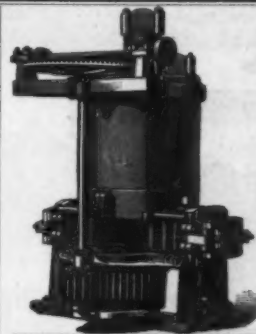
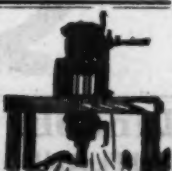
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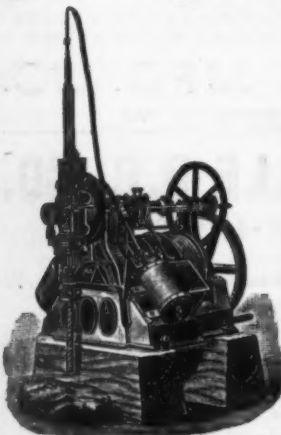
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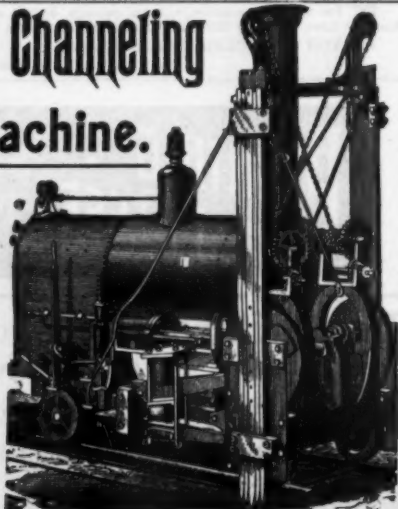
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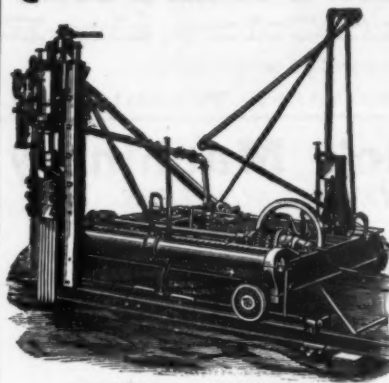
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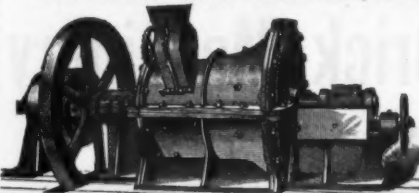
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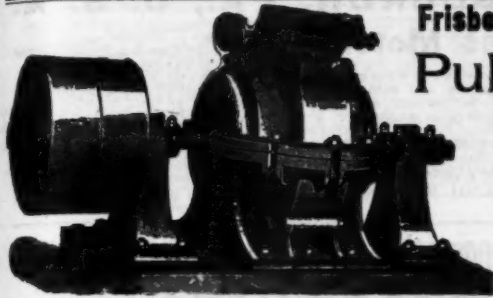
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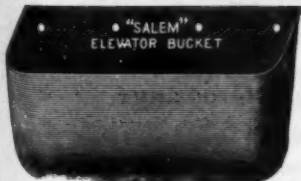
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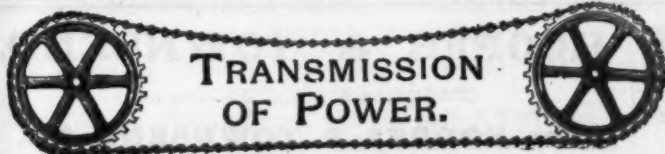


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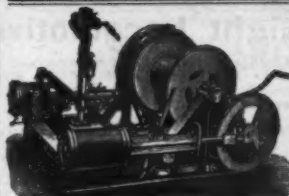


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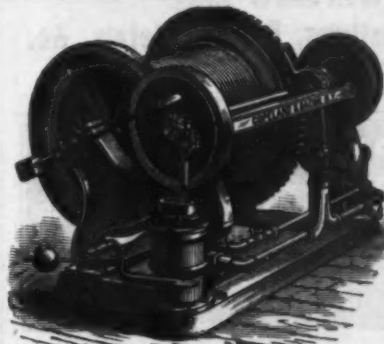
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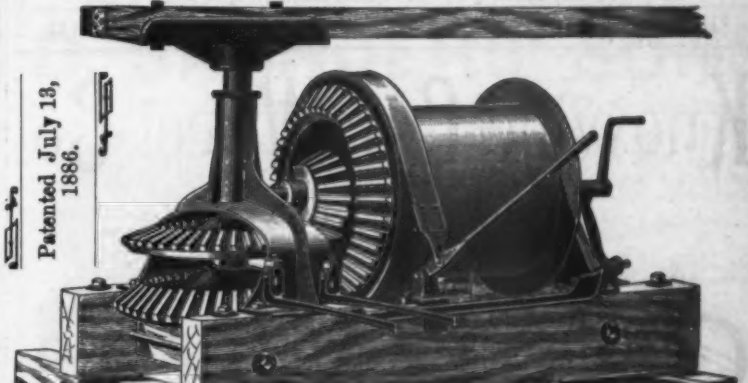
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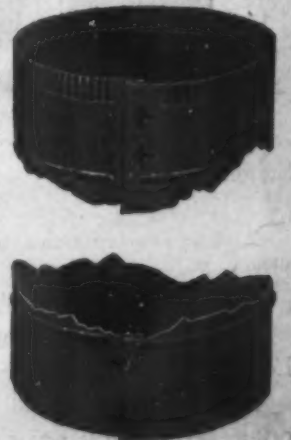
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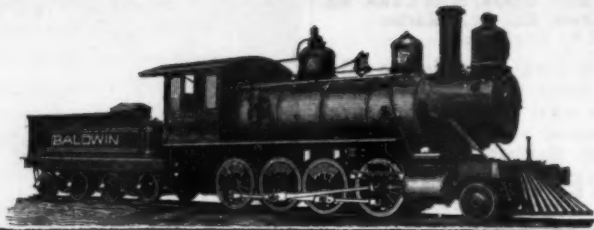
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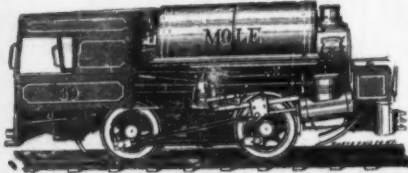
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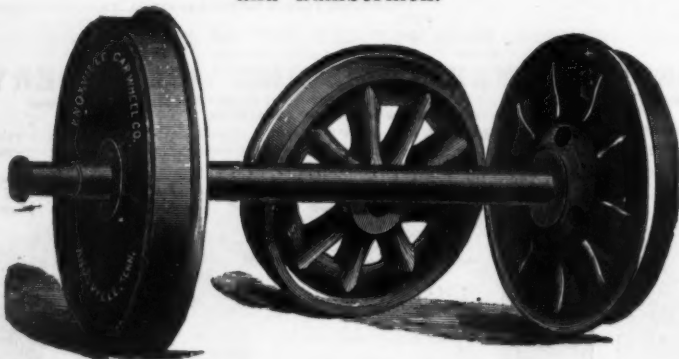
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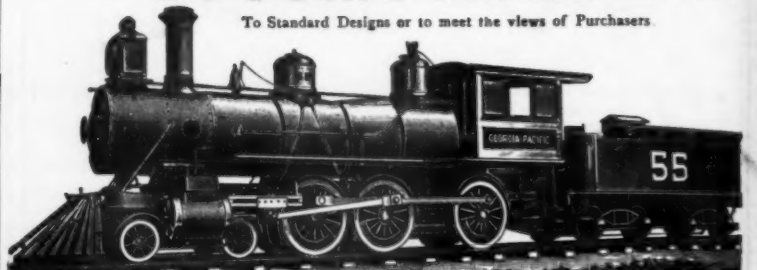
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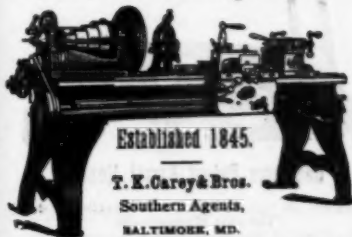
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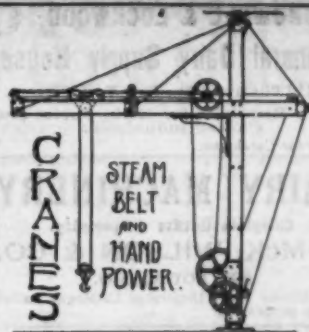
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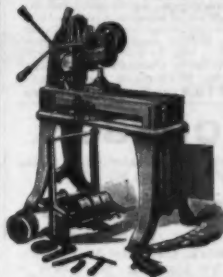
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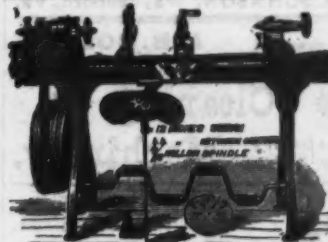
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No. 61-1/2 is the most perfect tool I ever saw for the money." "I can
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body is at rest, steady, the hands and attention free for the job."
"The foot-power is the best foot-power of any for lathes."

If desired, these machines will be sold ON TRIAL. The purchaser can have ample time to test
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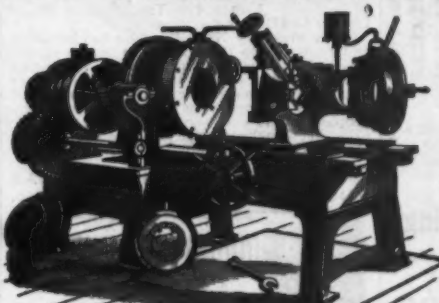
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Will ship
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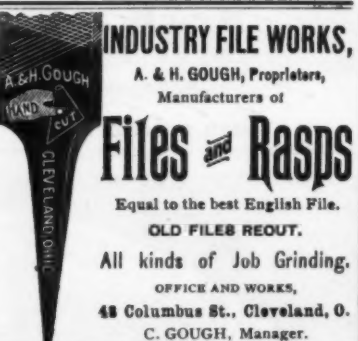
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Started by our Printed Directions.

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Charter Gas Engine Co., Sterling, Ill.
DEAR SIR:—My No. 4 Gasoline Engine gives
entire satisfaction thus far, and I see no reason
why it should not continue to do so. The engine
was set up and started in less than ten hours
after being put in shop, according to your printed
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WOOD SPLIT PULLEY,

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Chattanooga Wood Split Pulley Co. Chatt., Tenn.**STEAM HEATING.****Barnard's Condensing System**

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**SAVES COAL, PERFECTS
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PREVENTS ALL NOISE,
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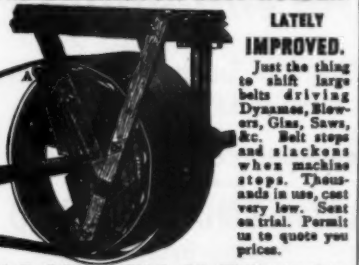
Uses Exhaust Steam if any, without back pres-
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Write us for a copy of our book on
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Containing full information about
tin roofing; showing how to select,
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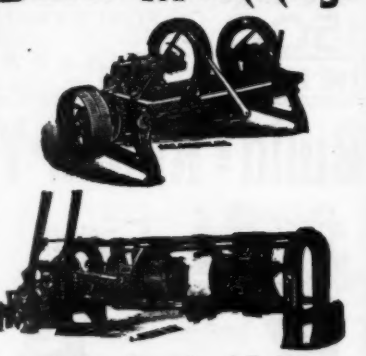
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The best Heater made.**E. & B. HOLMES, Sole Agents.****WIRE RAILING**

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Wire Cloak, Screens, Fences, Cases, Sash and Coal
Screens, Iron Bedsteads, Chairs, &c.**WIRE & WIRE GOODS.**Wire Cloth, Rope, SCREENS for
Coal and Ores. Barbed and
Plain Fencing Wire. Bank
and Office Railings.Artistic Work a Specialty.
Send for catalogue and mention this paper.

Read What a Michigan Miller Says of the Case Company.



STURGIS ROLLER MILLS,
BAUER & BUHRER, Proprietors.

STURGIS, MICH., July 12, 1890.

The Case Manufacturing Co., Columbus, Ohio:

GENTS—We started mill July 7th. The 12 pair 9x18 rolls you furnished us worked perfectly. They are so easy to adjust, so simple to handle, feed so regularly, grind so nicely and even, and work so smoothly on the whole, that we have no hesitancy in stating that we cannot see how they can have a superior, if equal. Aside from their perfect work, they are models of beauty and finish, and a decided ornament to any mill. We enclose clippings from papers. We are, with best wishes,

Very truly yours,

BAUER & BUHRER.

For full particulars regarding the best FLOUR OR CORN MILL MACHINERY, address



THE CASE MANUFACTURING CO., Columbus, Ohio.

Heberling's Anchors and Caps.

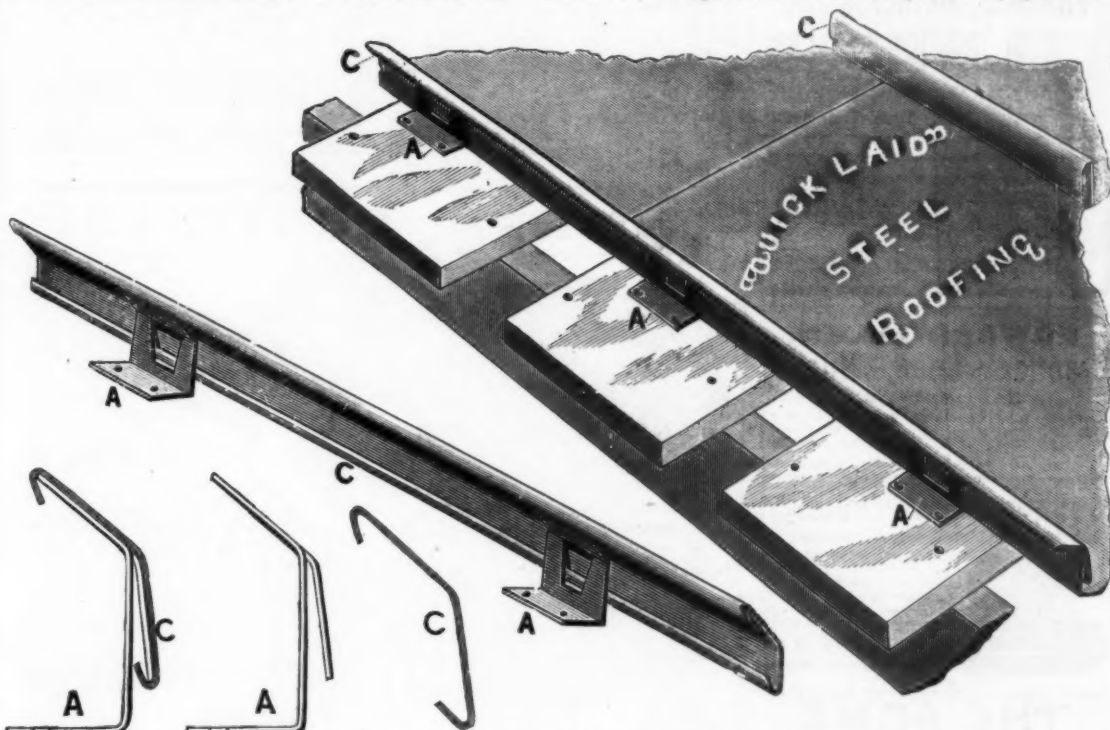
The accompanying illustrations represent the "quick-laid" steel roofing manufactured by the Heberling Metal Roofing Co., Havana, Ills. Some of the features of this roofing are unlike all others, and the ease and rapidity with which it can be laid is one of its chief advantages. There

The Nubian Iron Enamel.

Probably few of our readers are unacquainted with the productions of the Nubian Iron Enamel Co., 163 Sangamon street, Chicago, who are well known to the trade throughout the United States. Especially are they known to all users of blacks for iron. Until a few years ago no

cement and Bonnell's Nubian compound. The cement is a composition of Nubian and graphite in proper proportions to make a grease-like mixture, which, unlike all other mixtures for making pipe-joints and such work, never hardens or separates in the can; it is always ready for use, while the price is below even red lead and oil. The Nubian compound is a preparation for

based on a reasonable manufacturer's profit. The accompanying cut is an illustration of the goods as put up for family use; they hold half pint. A brush accompanies each can, which makes it a very convenient article for every home or office.



END VIEWS. (A, Anchor. C, Cap.)

HEBERLING'S PATENT ADJUSTABLE ATTACHED ANCHORS AND CAPS.

are no cleats to handle, as these are adjustably attached to the caps at the factory and are applied to the roof with them, and as the caps have their edges trimmed and are smooth and pleasant to handle, they can be shoved together very rapidly. The caps telescope in line with cleats attached, thus insuring a smoothly connected capping the entire length of seam. There are no "stair-steps" or "jump-offs" in a seam covered by them, and their hemmed edges close tightly against the sides of the seams, and are sure to exclude the water. It is claimed that these caps with cleats attached are the only ones that stand out of the way in nailing properly to roof-boards, or of laying each successive sheet on the roof. The "quick-laid" roofing is put up in patent packages, which protects it in transportation, thus insuring its being received in good condition. The nails and all the parts for laying each package are shipped in it, ready for use. An illustrated descriptive circular showing method of laying this roofing will be sent to those interested on application to the manufacturers.

Subscribe to the MANUFACTURERS' RECORD
Price \$4.00 a year, or six months for \$2.00.

makers of varnishes paid much attention to blacks; they all made asphaltum, but as there was not as much money in it as in other lines it received but little attention. Mr. Bonnell, manager of the Nubian Iron Enamel Co., conceived the idea of making a specialty of this branch of the business, believing that if he made good goods and at fair prices the result would be a satisfactory business venture. That it has is well known to those who have noted their constant growth. They have had to increase their facilities by either moving or enlarging four times in the last five years, and now are negotiating for property on which to erect a plant suitable to this business. It is possible by large expenditure of money to make any business reach large proportions, but the increase in the sales of Nubian have not been so stimulated. The company started in a very limited way, and while at present they are extensive advertisers, the money so spent has all been made out of the business. Their line is very comprehensive, ranging from the cheapest dipping black mad* to a high grade enamel for bicycles, and also a special black for electrical work. Recent additions to their line is Bonnell's Nubian pipe



use of electric companies for insulating conduit work; it is very elastic and at the same time hard enough to be durable, while the price, unlike everything else, is

Clamp for Ice Cream Freezers.

This article, which is just being placed on the market, will readily be appreciated. It is a simple and cheap attachment for securing an ice cream freezer firmly in place while freezing operation is in progress. To clamp the freezer it is only necessary to put the screw-eyes into the bench, chair or box on which the freezer is usually placed, one on each side of the freezer and about an inch or two away from it. The wire rods are then hooked into the screw-eyes and the hooks laid over the edge of pail and all tightened securely by screwing down the thumb nut. The whole operation can be done in very little time, and the freezer is held very firmly.

Where people are in the habit of standing the freezer in the kitchen sink to catch



CLAMP FOR ICE CREAM FREEZERS.

the water when it commences to run off, it is a very simple matter to cut an inch board to fit inside the sink and fasten the freezer to it.

The advantages claimed for this freezer clamp are lightness in weight and the fact that they are made of malleable iron and wire and tinned all over to prevent rusting. They are made in four sizes at present—No. 1 holds 2 and 3 quarts, Gem freezers; No. 2, 4 and 6 quarts, Gem freezers; No. 3, 8 and 10 quarts, Gem freezers, and No. 4, 14 quarts, Gem freezers. They can be retailed at 25 cents per pair, leaving a good margin. They may be sent by mail, weighing only seven ounces. Further information, samples and discounts can be had from the manufacturers, American Machine Co., Lehigh avenue and American street, Philadelphia, Pa., who also make the "Gem freezer."

An ice plant erected last season and now in successful operation at Water Valley, Miss., is offered for sale in this issue by Ater & Wilkins, who will give full information upon application.

The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, August 20, 1890.

The iron trade throughout the country continues in about the same condition as for some weeks past. Latest furnace reports show that in July the number of furnaces in blast declined from 336 to 324, and the weekly production fell from 180,000 tons to 165,000 tons. It should be noted that this decline in production is not due so much to a falling off in demand as to a desire on the part of a few furnace managers to put their furnaces in perfect repair, so as to make still more iron. The mill managers throughout the country took advantage of the mid-summer stoppage to thoroughly repair their mills, so that the rolling capacity of the country is now in better shape than ever. One iron authority gives the weekly output of anthracite iron in July at 42,441 tons, and another 41,000 tons. The same authorities give the bituminous and coke iron output at 113,000 and 110,000 tons, respectively, and the charcoal iron output at 10,745 tons and 11,644 tons, respectively. The total estimate of one is 164,793 tons per week, the other 164,067 tons per week. Both claim to be close estimates. A goodly number of both new and repaired furnaces will be blown in within the next 60 days, but no accumulation of stocks may be expected to result. Buyers throughout the country have been purchasing very carefully, knowing, or rather apprehending, that there would be an increase in production in the fall and winter. Prices continue strong in all markets, excepting for some inferior brands of iron, and quotations are unchanged. At Chicago Southern No. 1 coke iron is selling at \$16.50, No. 2 at \$16 and No. 3 at \$15; Alabama car wheel \$22.50 to \$24. At Louisville Southern No. 1 foundry is quoted at \$15, No. 2 at \$14.50 and No. 3 at \$14; car wheel \$22.50. At New York Southern foundry irons are scarce. No. 2 soft iron is bringing \$16. A good deal of talk has been going on in New York concerning a speculative movement by American operators in Scotch warrants. It is not likely, however, that anything will come out of it.

At Philadelphia Southern No. 2 iron has sold at \$16 and cinder irons as low as \$14.25. Gray forge, Pennsylvania make, is quoted at \$15 to \$15.50, and there have been some large operations in it. At Cleveland Bessemer has been selling freely at \$19 to \$19.30. It is clearly evident that large buyers of foundry, forge and Bessemer are making preparations to place large orders. Several contracts for foreign billets have just been closed at \$32.75, ex ship. Wire rod billets are selling at \$31, ex ship. Foreign wire rods are offered at New York at \$45.

Steel rail transactions are known to have been quite heavy, but details are not to be had. Sales this year up to August 1 foot up 1,260,000 tons, and deliveries for the same time 850,000 tons.

In all other branches of the iron trade there is a healthy activity, but nothing calling for special mention. A great deal of plate and structural material is being bought.

HARDWARE.

Orders from the South have been increasing in number and quantity, and reports are encouraging. Prices remain unchanged and may be noted as firm. The handled hoe manufacturers have made some advance in prices over last year, and as there will be comparatively few makers in the market the coming season, prices will be held very firm. From present indications the scythe market will be firm, as there are not over five manufacturers still in the business; three of these are owned by the American Axe & Tool Co. Shovels are gradually becoming higher, particularly the lower grades, as many of the large manufacturers refuse to make them. Brass and copper goods are high and very firm.

—AMERICAN— Pig Iron Storage Warrant Co.

(Bank of America Building.)

44 Wall Street, NEW YORK.
Correspondence of Furnaces Invited.

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AND

BELT MANUFACTURING CO.

Manufacturers of Oak Tanned and Rawhide Leather Belting, Lace Leather, Pickler Leather, Ropes, Lariats and other Rawhide Leather Goods. NASHVILLE, TENN.

BELTING

Southern Agents—Hoyt's Pure Oak-Tanned Leather Belting, The New York Belting & Packing Co., The Gandy Belting Co. and Excelsior Raw Hide Lace Leather. The largest stock south of New York, assuring prompt shipments. Write for prices.

BAKER, SLOO & CO.

NEW ORLEANS, LA.

SLIPPING and SWEARING

PREVENTED BY USING

DIXON'S BELT DRESSING

And Leather Preservative.

Absolutely prevents slipping, thoroughly preserves the leather. Not a new and untried article. It will pay you to send for circular and testimonials.

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For one dollar, currency or stamps, we will send to any part of the United States, express charges paid, our perfect Grease Cup. It is right feed, and forces all the grease out of the cup without being touched. We send sufficient grease for trial. The cup is well finished, and is an ornament anywhere. One cup of grease will do the work of six cups of oil. For loose pulleys, crank pins, etc., it has no equal. CRESBENT MFG. CO., Cleveland, Ohio.

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Sulphuric Acid Chambers constructed on the latest improved plan. Strict attention given to the Lead Work of Concentrating Apparatus.

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McShane & Bell & Foundry

Fine Iron and Brass Castings Made to Order.



Manufacture those celebrated Bells for Towers, Clocks, Court-Houses, Cotton Mills, Factories, etc. Prices and catalogues sent free. Address H. McSHANE & CO. Baltimore, Md.

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GUARANTEED
THE STRONGEST AND BEST
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THE STANDARD Eave Trough Hanger

PATENTED
MADE OF BEST GALVANIZED
STEEL WIRE.

CHEAP, STRONG,
AND
DURABLE.

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The "Original Gandy"

Sewed Cotton Duck Belting.

Especially adapted for Main Drivers, Saw Mills, Cotton Gins, Cotton Presses, and for all places where belts are subjected to moisture or atmospheric changes, the "GANDY" stands paramount.

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SOUTHERN AGENTS: Smith & Courtney, Richmond, Va. Atlanta Rubber Co., Atlanta, Ga. Baker, Sloo & Co., New Orleans, La.

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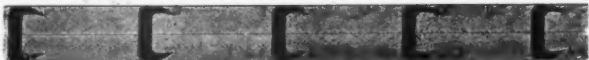
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special grades

Acme Link and Eureka Dynamo.

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mechanically made; is a belting

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IT BELTS THE EARTH AND MAKES THE MOON SPIN LIKE A TOP.

OUR BELTING IS TANNED ON THE SURFACES ONLY. INTERIOR IS RAWHIDE. The only perfect Belt made No slipping or lost motion.

SEND FOR OUR VALUABLE BOOK, "FREE."

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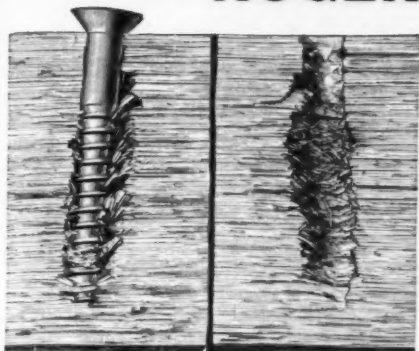
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"ROGERS' DRIVE SCREWS."

Patented May 10, 1887; July 19, 1887;
July 10, 1888. Other patents pending.



A common cut thread screw as ordinarily inserted—i. e., driven two-thirds of its length with a hammer and the balance with a screw driver. Fibres of the wood are necessarily broken, and the holding power of the screw much impaired.



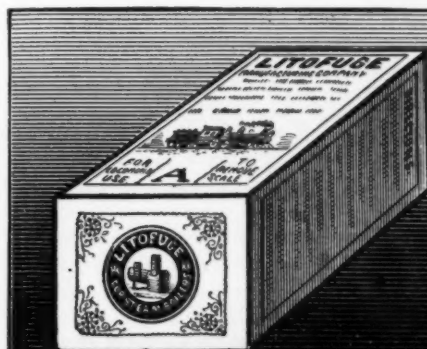
The "ROGERS' DRIVE SCREW" driven with a hammer its entire length. It revolves as it goes in and does not break the fibres of the wood, but makes its own nut of the cavity it forms.

WIER & WILSON, Agents, Baltimore, Md.

The foregoing illustrations speak for themselves, but we call attention to a few advantages of the "ROGERS' DRIVE SCREWS."

1. Stiffness, adapted for driving with a hammer.
2. Rapidity of insertion.
3. Increased holding surface.
4. Ability to be driven with hammer and withdrawn with screw driver numerous times from same hole.
5. Superior head, which will withstand blows of a hammer and not impair the slot.
6. Improved slot, admitting the use of a heavier screw driver.
7. A Rogers' Drive Screw of small diameter will hold as much as a common screw of a larger diameter.

Discount 66 2/3 per cent. from list of common screws.



Litofuge.

is the best boiler Compound.

LITOFUGE MANUF'G CO. 62 JOHN ST. NEW-YORK.

PERFORATED METALS OF EVERY DESCRIPTION BY THE HARRINGTON & KING PERFORATING CO. CHICAGO.

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VAILE & YOUNG'S Patent Metallic Skylights.



308 & 311 NORTH STREET, BALTIMORE, MD.

METAL SKYLIGHTS

Made of galvanized iron and copper. Absolutely no leakage from any source; no dripping or sweating; fire-proof; ventilating. Galvanized iron and copper cornices and gutters. Sheet metal work for buildings. Send for illustrated circular.

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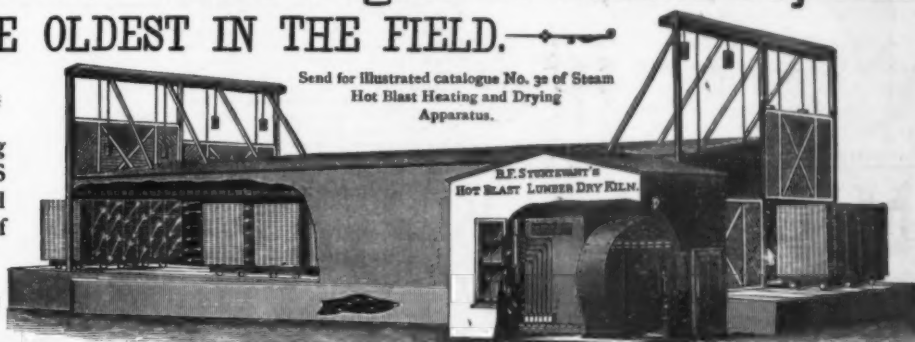


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BRANCHES—91 Liberty Street, New York, 31 N. Canal Street, Chicago. W. R. Burgess, Agent, Greensboro, N. C.

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RICHMOND, INDIANA,

— MANUFACTURERS OF —

FLOUR MILL MACHINERY

IN ALL ITS BRANCHES.

A Majority of the Best Flour Mills in the South Equipped by this Company.

CORRESPONDENCE SOLICITED.

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MANLY MFG. CO. DALTON, GEORGIA. RAILINGS, GATES, POSTS, CRESTINGS, JAILS, ROOFS, STAIRS, Cast Columns, Lintels, Sills, &c. All sorts of Saw Mills, Improvements.

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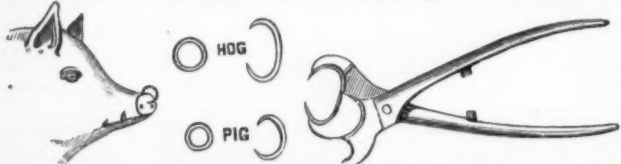
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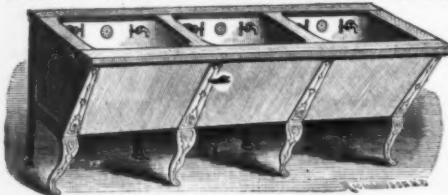
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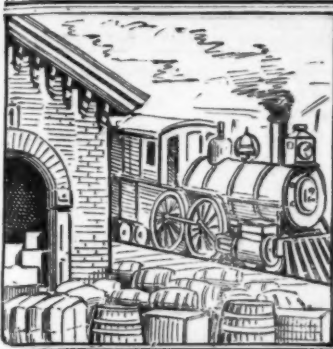
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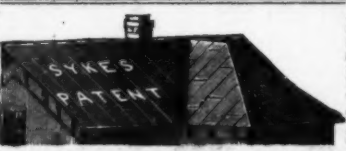
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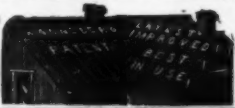
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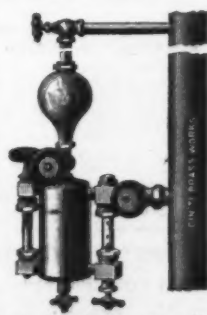
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SAMPLES & PRICE LIST.

Eastern Lumber Markets.

[Special Cor. MANUFACTURERS' RECORD.]

NEW YORK, August 19, 1890.

The latest talk in this city is, that the wholesalers are about to make preparations to stock up with all kinds of lumber. It does not follow that they will attempt to pile up all their stocks here, or even near by. The facts of the case, so far as can be learned, are about these: Within the past year or two a great deal of saw mill capital has been invested; timber land has been purchased, logging roads built and expenses of one kind or another incurred. Notes have been falling due, and cash is needed. The mills have been busy piling up stuff, which, rapidly as stuff has been selling, is not all sold. A good many lots of this kind of lumber have been offered to Eastern men for spot cash or for liberal advances, and the outcome is that several of them have agreed to buy, the terms being quite favorable.

The lumber dealers of this city view with regret the effort of a good many interior people to capture trade direct by cutting prices. For a year or two past prices have remained stationary and under the control of the local trade. Some Western and Southwestern parties have concluded to undo this condition of things, not intending to do so, but simply in the endeavor to sell lumber faster than it can be sold here through the established agencies.

Business has been good for the past week. Stocks are not accumulating, not withstanding the fact that an immense amount of stuff has been coming in. The demand for finishing lumber and straight-grained flooring is equal to the supply. A good deal of inch oak has been coming in, all of which has found a ready market. There is not much quarter-sawed oak on the market, and prices have been gradually hardening all the season. Some wholesalers who have been disappointed in the promises of manufacturers have taken a vacation to see if they cannot obtain supplies in the West from other quarters. Soft gray elm is selling very well, and is crowding out oak in some quarters. Common oak has begun to sell very well. Sycamore and basswood are beginning to sell well, the demand for the former having picked up very suddenly. A good deal of maple flooring is going into builders' hands. Walnut is attracting very little attention. Almost anything that can be used instead of walnut is taken.

The Philadelphia market shows no particular activity, but there is a steady movement in all kinds of lumber. A good deal of yellow pine is reaching that port and Baltimore, and going into immediate use. Reports from Tonawanda show an active trade, particularly in white pine.

Boston markets are active on account of a great deal of work throughout the interior of New England. The distribution of Southern pine is heavy in all Northeastern markets.

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8x3	1 1/4 to 2 1/4	8	2 50	5 00	5 50
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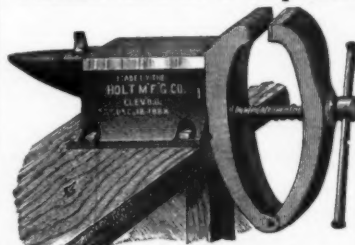
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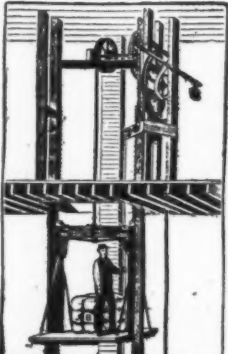
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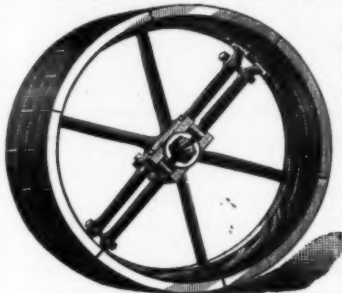
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The Ohio Pulley & Machine Co., of Warren, Ohio, are the manufacturers of the wood rim, iron center split pulley, which is shown in the accompanying illustration. This pulley, having iron arms and center, is very light and strong. It is made by a patent system of bushings, so



WOOD RIM SPLIT PULLEY.

that one pulley can be adjusted so as to fit any size shaft. The center has six bearings at equal distances on the shaft. It is claimed that this fastening will never slip. Neither will it mar or spring the shaft. Some of the points claimed for this pulley are easy adjustment, strength, an increase of power transmitted of from 30 to 50 per cent. than from an iron or steel-faced rim.

The company guarantees every pulley made, and allows a trial of 30 days to any

heater is cylindrical in shape and of about the same construction as the company's low-down combination steam and warm air heater. The bottom "Z," ash pit "K," fire-pot "L," combustion chamber "SS," feed chute "F," dust damper "I," and double casing "T" are the same as those used in the construction of the warm air heater.

The hot water chambers "CCC" are flat and round, made of heavy cast iron with 2-inch vertical diameter, and are connected to one another by the upright connections "DDD." These connections are screwed into shoulders on the chambers, and are locknitted thereto over asbestos and lead-filled cup joints. These chambers are suspended inside of the combustion chamber, so that the draft shall not be impaired, but so that the exit of the products of combustion shall be retarded until the heat is entirely yielded. The fire exposure is as nearly uniform as it is possible to secure; as each alternate section extends from side to side of the combustion chamber, the product of combustion is forced to traverse over the entire top and surface of each section. The heated gases and smoke ascend alternately around the sides of the smaller chambers and through four flues near the center of each of the larger sections, until the exit flue "A" is reached, where they pass into the smoke pipe at a temperature said to be

produced by taking the air from the outside through the cold air duct "V," passing it through the air heating chamber "N N N" in the same manner as by a warm air furnace. The air being properly heated and moistened by water evaporation (by means of a vapor pan not shown in illustration), is distributed through the warm air pipe "O O" to the registers in the principal apartments nearest to the heater. The former, the direct hot water radiation, is obtained by a continuous circulation of water which passes into the lower chamber "C," and after being heated passes up through each of the corresponding sections and through the feed pipes to the radiators, where the heated water radiates its heat and by natural gravity returns to the lower section of the heater.

Further information concerning this heater, together with the warm air furnaces manufactured by this concern, may be had upon addressing the J. F. Pease Furnace Co., Syracuse, N. Y., Boston, New York city or Chicago.

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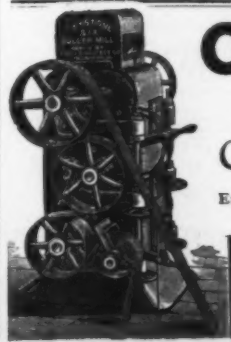
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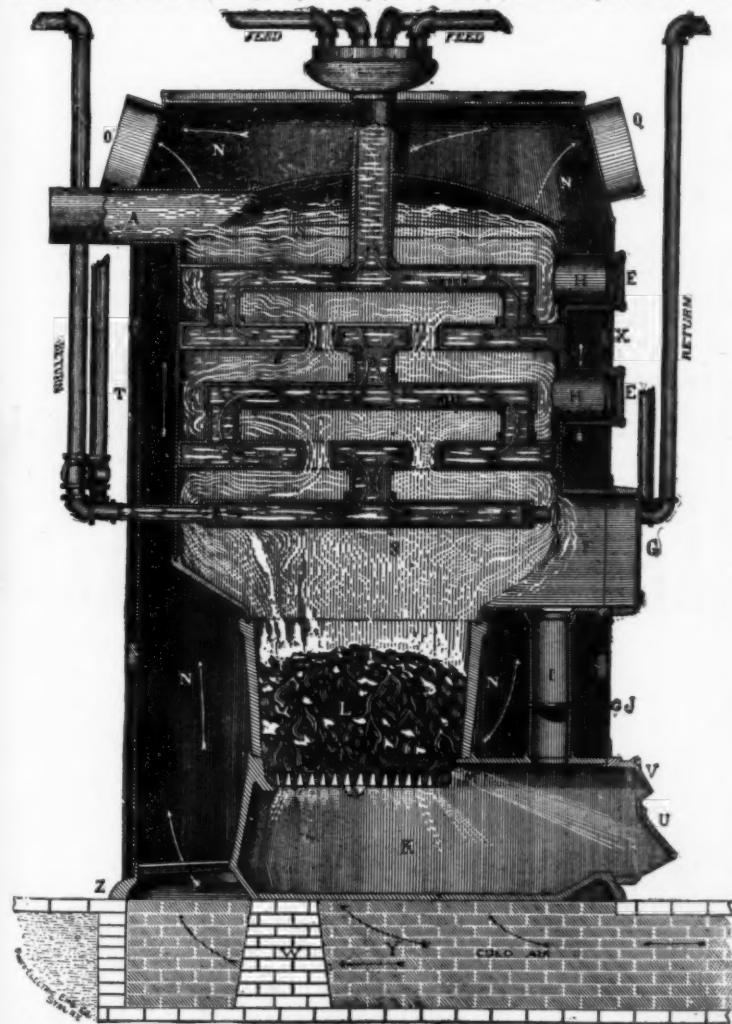
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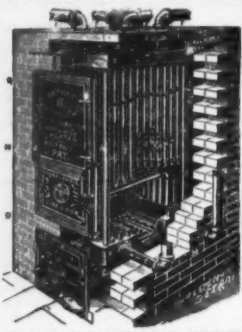
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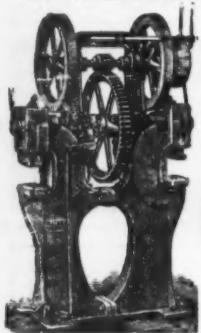
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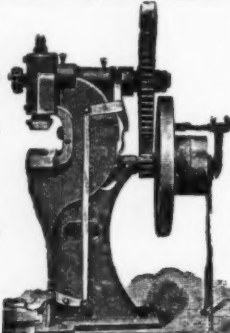
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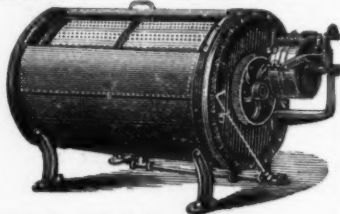
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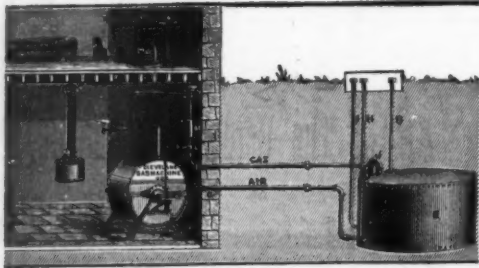
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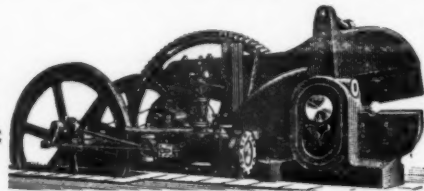
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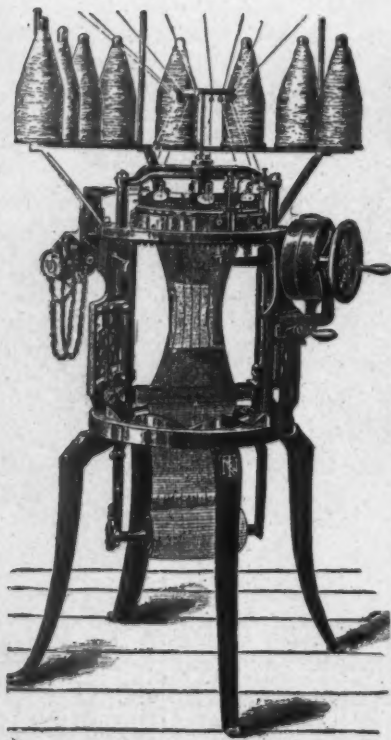
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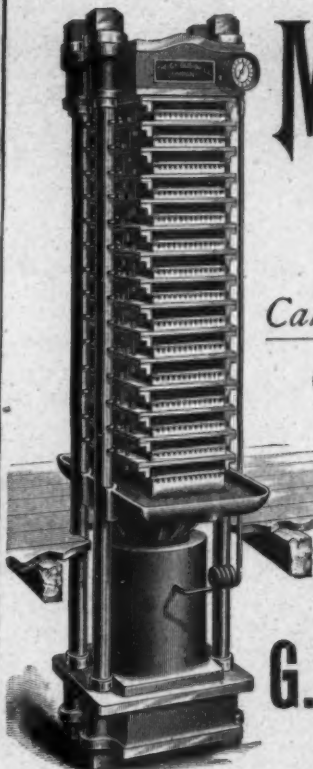
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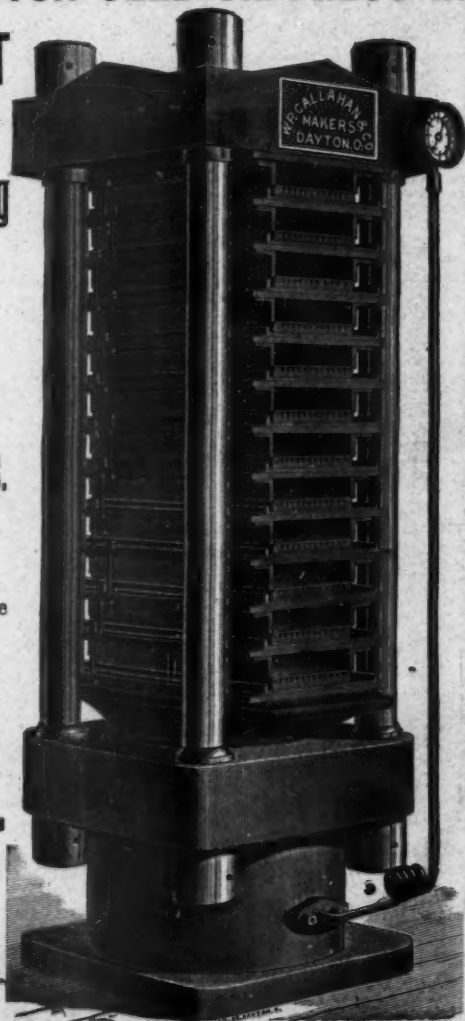
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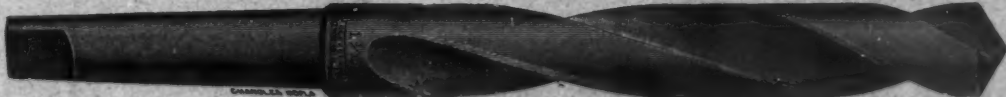
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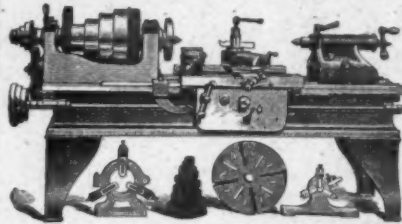
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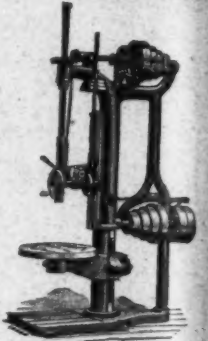
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